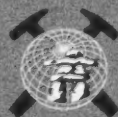


# MINERAL EXPLORATION, MINING AND GEOSCIENCE OVERVIEW 2011



Aboriginal Affairs and  
Northern Development Canada

Affaires autochtones et  
Développement du Nord Canada

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## ABOUT THE NUNAVUT: MINING, MINERAL EXPLORATION AND GEOSCIENCE OVERVIEW 2011

This exploration overview is a combined effort of four partners: Aboriginal Affairs and Northern Development Canada (AANDC), Government of Nunavut (GN), Nunavut Tunngavik Incorporated (NTI) and Canada-Nunavut Geoscience Office (CNGO). The intent of this publication is to capture information on exploration and mining activities in 2011 and to make this information available to the public.

We thank the many contributors who submitted data and photos for this edition. Prospectors and mining companies are welcome to submit information on their programs for inclusion in the next Overview. Feedback and comments are appreciated.

## NOTE TO READERS

This document has been prepared on the basis of information available at the time of writing. All resource and reserve figures quoted in this publication are derived from company news releases, websites and technical reports filed with SEDAR ([www.sedar.com](http://www.sedar.com)). Readers are directed to individual company websites for details on the reporting standards used. The authors make no warranty of any kind with respect to the content and accept no liability, either incidental, consequential, financial or otherwise, arising from the use of this document.

All exploration information was gathered prior to December 2011. All projects with active status in this publication had exploration work completed during the 2010 or 2011 field season. Inactive projects did not have exploration work done in 2010 or 2011, but may have active mineral tenure as shown on SidViewer, and valid Land Use Permits and Water Licenses as issued by AANDC and the Nunavut Water Board, respectively.

With reference to the use of the term *National Instrument 43-101 (NI 43-101)*: This is an industry standard outlining rules and guidelines for reporting and disclosing scientific and technical information about mineral projects. This standard is supervised by the Canadian Securities Administrators.

## ACKNOWLEDGEMENTS

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*Cover photo: Folding in banded silicate-iron formation, Prince Albert greenstone belt, Melville Peninsula. Courtesy of the Canada-Nunavut Geoscience Office and Geological Survey of Canada. Photo by Gabriel Machado (CNGO).*



# LAND TENURE IN NUNAVUT

The territory of Nunavut was created in April 1999 as a result of the Nunavut Land Claims Agreement (NLCA), the largest Aboriginal land settlement in Canadian history. Spanning two million square kilometres (km<sup>2</sup>), the territory has 25 communities and approximately 33,000 people. Inuit represent 85 per cent of Nunavut's population, creating the foundation of the territory's culture and values. This culture is inherently connected to the land, shaping government, business and day-to-day life.

In addition to the creation of the territory, the NLCA gave Inuit fee simple title to 356,000 km<sup>2</sup> of land. There are 944 parcels of Inuit Owned Lands (IOL) where Inuit hold surface title only (surface IOL). The Government of Canada or "the Crown" retains the mineral rights to these lands. Inuit also hold fee simple title, including mineral rights, to 150 parcels of IOL (subsurface IOL), which total 38,000 km<sup>2</sup> and represent approximately two per cent of the territory. Surface title to all IOL is held in each region by one of the three Regional Inuit

Associations (RIAs) while title to subsurface IOL is held and administered by Nunavut Tunngavik Incorporated (NTI). NTI issues rights to explore and mine through its own mineral tenure regime. For both surface and subsurface IOL, access to the land must be obtained from the appropriate RIA.

The Crown administers mineral rights to 98 per cent of Nunavut. Aboriginal Affairs and Northern Development Canada (AANDC) manages these rights through the *Northwest Territories and Nunavut Mining Regulations*. Land use permits for activities on Crown land are issued by AANDC under the *Territorial Land Use Regulations*.

Significantly, the NLCA is a final settlement whereby all land claims in Nunavut have been settled with the Inuit of Nunavut, thus providing an unmatched level of land tenure certainty.

For more information on the location of IOL and Crown land in the territory, refer to the *Nunavut Mineral Exploration, Mining and Geoscience Active Projects 2011 Map*.

Number of Mineral and Exploration Properties in Good Standing in Nunavut Source: AANDC

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Permits	146	343	464	1,875	2,267	1,395	1,057	1,041	394	477	314
Claims	3,010	6,008	7,560	10,138	9,644	6,707	7,905	8,088	7,613	7,178	6,777
Leases	271	270	263	271	332	352	354	479	590	631	567

Who is doing the work? Source: Natural Resources Canada, October 2011

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Juniors (Millions \$)	40.1	31.7	48.5	107.9	132.5	161.8	237.4	261.4	67.9	119.6	247.2
Seniors (Millions \$)	21.2	44.2	44.2	79.6	46.2	48.8	100.6	171.2	107.7	161	148.3

Siksi, Amer Camp  
Source: AANDC





Aboriginal Affairs and  
Northern Development Canada

Affaires autochtones et  
Développement du Nord Canada

In 2011, Indian and Northern Affairs Canada changed its departmental name to Aboriginal Affairs and Northern Development Canada (AANDC). The new title is more inclusive of the Minister's and department's responsibilities, and is consistent with the Government of Canada's focus on moving forward in its relationship with Aboriginal peoples and its role in northern development.

The department continues its focus on improving northern regulatory regimes and upholding the values outlined in *Canada's Northern Strategy*. The proposed Nunavut Planning and Project Assessment Act, as a commitment flowing from the *Action Plan to Improve Northern Regulatory Regimes*, is ready to be introduced to Parliament. The proposed Act:

- demonstrates the government's commitment to environmental stewardship and land use planning;
- provides clarity, predictability, consistency and legal certainty to project assessment that will promote investor confidence and improve operational effectiveness; and
- provides innovative legislative improvement for land use planning and environmental assessment.

Regulatory improvements are also a key priority for the department. More than 1,200 stakeholders in Nunavut and the NWT, including the mining industry, First Nations, Inuit and non-government organizations, have been consulted in efforts to modernize mining regulations in the North. Many of the recommendations from these engagement processes have been incorporated into subsequent amendments to the regulations, while other amendment work is ongoing. The ultimate goal for the department is to replace the *Northwest Territories and Nunavut Mining Regulations* with two sets of federal regulations: the "Northwest Territories Mining Regulations" and the "Nunavut Mining Regulations."

The current trend in Canadian mining jurisdictions is toward more modern and automated systems of mineral rights administration, including map selection. Map selection is an important innovation for Crown land management in the territory, and there have been strong efforts at the regional and national level to move forward. In 2011, AANDC officially began the map selection project for Nunavut, and implementation is expected in late 2014.

Work has continued on the development of the new *Nunavut Waters Regulations*, in conjunction with territorial partners such as the Nunavut Water Board, the Government of



Unloading heavy equipment, Jericho Mine  
Courtesy of Steve Damski

Nunavut, and Nunavut Tunngavik Incorporated. As required by the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*, these regulations will be comprehensive and reflect the economic, operational, and administrative realities of Nunavut while maintaining high standards of environmental protection. It is expected that the *Nunavut Waters Regulations* will enter the approval phase this winter, and come into effect mid-to-late 2012.

Exploration and development in Nunavut was strong in 2011, and AANDC continued its role as an advocate for sustainable mineral development in the territory. It does this through its land administration, water management, environmental management, mineral development and field operations responsibilities.

## OUR WORK BY THE NUMBERS

In 2011, in the Nunavut region, AANDC has:

- Issued 106 prospecting permits, bringing the total number of existing prospecting permits in the territory to 307. This totals more than 5,318,400 hectares (ha), an area approximately the size of New Brunswick.
- Issued 1,081 mineral claims (as of December 1, 2011), 59 coal licences and eight mineral leases.
- Issued 25 Land Use Permits and granted 44 extensions, bringing the current number of active permits to approximately 120. These numbers are a strong indicator of increasing exploration activity in the territory – as are the 56 Quarry Permits also issued this year.



- Provided advice to the Nunavut Impact Review Board for environmental assessment reviews of three major project proposals.
- Inspected 151 land and water authorizations associated with exploration camps, mines and research camps.
- Provided advice to the Nunavut Water Board in the assessment of 77 water licence applications or amendments and reviewed 32 associated plans.
- Completed field reviews of 31 exploration and mine development projects.

Based on 2011 statistics, approximately 9,060,326 ha (90,603 km<sup>2</sup>) of Crown land in Nunavut is covered by either prospecting permits, mineral claims, or mineral leases. This equals about 4.7% of Nunavut's land area. According to statistics released by Natural Resources Canada in November 2011, it is estimated that more than \$396 million has been spent on exploration and development in Nunavut this year. That leaves Nunavut 4<sup>th</sup> in Canada in terms of overall investment, after Ontario, Quebec, and British Columbia.

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Arctic hare at Kiggavik Camp  
Courtesy of AANDC

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# GOVERNMENT OF NUNAVUT



The Government of Nunavut (GN), through the Department of Economic Development and Transportation (EDT), is working in support of a strong and diversified minerals industry based on best practices of sustainable development, and partnerships between Nunavummiut and industry. The Minerals & Petroleum Resources division is committed

to building and supporting a resource exploration and development sector across the territory. With one operating mine in Nunavut (the Meadowbank Gold Mine) and a number of advanced development projects, in addition to numerous quality discoveries, there are substantial opportunities to be realized in the territory as robust exploration continues and as more projects evolve into producing mines. EDT is working to ensure that all Nunavummiut are in a position to benefit from these opportunities, and that Nunavummiut have the option to become full participants in development underway in Nunavut.

At the same time, it is recognized that exploration and mining companies have the option of investing in many competing jurisdictions worldwide. Therefore, EDT works with its partners at Nunavut Tunngavik Incorporated and the Government of Canada to ensure that the legislative, policy and regulatory environments of Nunavut are efficient, internationally competitive and attractive to investors. Significant investment in the territory by major, multinational mining companies is a strong vote of confidence in Nunavut's mineral potential, its regulatory system, and the commitment of its people.

The department has its headquarters in Iqaluit; regional offices in Kugluktuk, Rankin Inlet, Pond Inlet, and Pangnirtung; and Resident Geologist Offices in Arviat and Cambridge Bay.

## PARNAUITIT: THE NUNAVUT MINERAL EXPLORATION AND MINING STRATEGY

*Parnautit: The Nunavut Mineral Exploration & Mining Strategy* was released in 2007 as the GN's framework of policies and actions to encourage mineral discovery and development in Nunavut. There are four pillars of the strategy that collectively address the territory's regulatory and taxation regimes, workforce training, infrastructure development, and environmental baseline availability. The goal of *Parnautit* is: "To create the conditions for a strong and sustainable minerals industry that contributes to a high and sustainable quality of life for all Nunavummiut."

The GN remains strongly committed to public geoscience as a means of encouraging new exploration opportunities. The GN provides core funding to the Canada-Nunavut Geoscience Office (CNGO) in Iqaluit, and direct program support of the CNGO's territorial mapping and research projects.

## COMMUNITY CONSULTATION GUIDELINES

The GN-EDT has developed Community Consultation Guidelines to promote and facilitate dialogue and understanding between communities, Inuit organizations, government and the minerals industry. The guidelines have built on the work of other organizations, such as the Nunavut Impact Review Board (NIRB), that developed guidelines for proponents to conduct public consultation during the NIRB environmental assessment process. The GN researched perspectives of all the parties involved to determine best practices for meaningful community consultations throughout the entire resource exploration and development process. These Community Consultation Guidelines will assist proponents in engaging with communities and addressing any issues that have prevented successful community consultation in the past.

The GN released a shortened version and pamphlet of the guidelines at Nunavut Mining Symposium in Iqaluit in April 2011. Final guidelines will be released in 2012.

## DEVELOPMENT PARTNERSHIP AGREEMENTS

The Development Partnership Agreement (DPA) program was introduced in 2006 as a means of extending the territorial off-road fuel tax credit (rebate) to developing and producing mines. Through a DPA, the GN and the resource development company or operator of a project work cooperatively to maximize social and economic benefits for Nunavut. A DPA addresses benefits such as education and training, socio-economic monitoring and mitigation, and infrastructure development. As the physical and economic circumstances of no two mines are alike, each DPA, too, will reflect the unique and shared needs of the mine operator and the local population. Proponents entering Nunavut's regulatory process are encouraged to begin negotiations with the GN on a DPA for their project.





*Participants in the Nunavut Prospectors' Program, Cape Dorset.  
Courtesy of E&E Development at Nunavut*

## NUNAVUT PROSPECTORS' PROGRAM & PROSPECTOR TRAINING

EDT provides technical and financial assistance to Nunavummiut with demonstrated prospecting skills. The Nunavut Prospectors' Program (NPP) provides project-related financial support for Nunavut residents engaged in prospecting to carry out their own work. The program, introduced in 1999, developed a guidebook to assist prospectors and applicants, and provides up to \$8,000 in annual financial assistance for each qualified prospector. There are typically 15 to 20 individual prospector's projects funded annually through this program in all regions of Nunavut.

Every year, EDT geologists present a six-day Introductory Prospecting Course to interested residents in communities throughout the territory. Each community has the training course delivered every three to four years. Since 2000, the courses have been held across Nunavut, with more than 800 graduates to date. The prospector training course introduces people to basic prospecting skills; graduates have applied for NPP funding to start their own projects. Additionally, many graduates are able to work as field assistants on mineral exploration projects. In 2011, the course was held in six Nunavut communities: Arctic Bay, Baker Lake, Cambridge Bay, Cape Dorset, Gjoa Haven and Rankin Inlet. In 2012, courses will be held in Grise Fiord, Kugluktuk, Pangnirtung, Qikiqtarjuaq and Resolute.

## CARVING STONE DEPOSIT EVALUATION

EDT geological and technical staff, on behalf of the carving industry and communities of Nunavut, has been working on a multi-year (2010 to 2014) deposit/commodity study of carving stone locations. The objective of this territory-wide project is to address carving stone source-material requirements for artisanal suitability and supply for many communities,

and to study and define new carving stone deposits. Data collected will be distributed via an interactive web database and will include site-specific artisanal, spatial, geographical, geological, and photographic information. Site materials are collected for archival, analytical and demonstrative purposes. Work is supported by the Canadian Northern Economic Development Agency (CanNor) and department funding.

A total of 46 sites were visited during the 2010 and 2011 field seasons. These sites are all located outside of 11 Nunavut communities and were initially identified by community carvers. The raw material most preferred by Nunavut carvers is dark-coloured, good quality, and soft serpentinite; to date 16 serpentinite sites have been evaluated. These sites range in size from small locations containing thousands of pounds to large deposits containing millions of pounds.

In 2011, fieldwork focused on known or presumed deposits around the communities of Pangnirtung, Iqaluit, Kimmirut, Cape Dorset, Hall Beach, Igloodik and Repulse Bay. Among Nunavut's larger deposits are the long-term quarries at Korok Inlet and Aberdeen Bay, shared by Cape Dorset, Kimmirut and Iqaluit.

Two extraordinary carving stone deposits in the million tonne range were accurately located in 2011. Both these deposits had been identified and mapped by the Geological Survey of Canada 40 years ago but were not known to the nearby communities. The 1,500 metre-long Kovic deposit is located 145 kilometres (km) inland from Repulse Bay. The 610 metre-long Kingora River deposit is approximately 105 km inland from Hall Beach and Igloodik. Both deposits are 45 metres wide, the same length as Nunavut's oldest producing quarry.

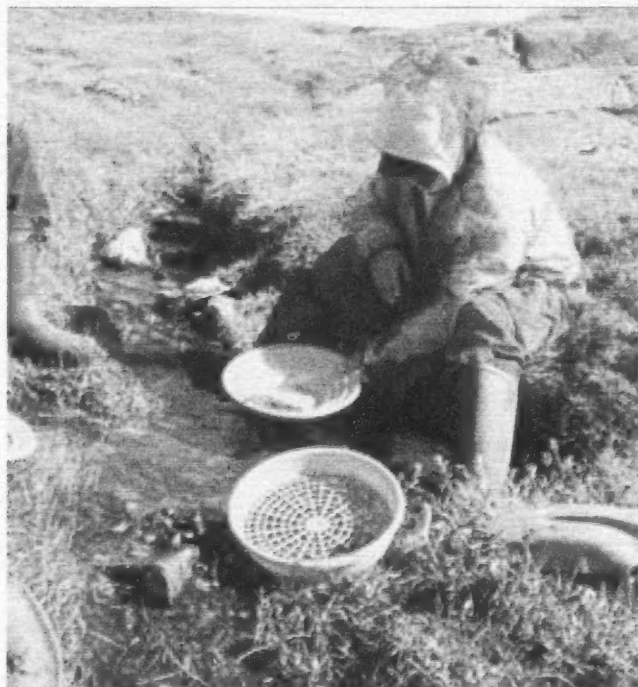
Program results to date have confirmed or expanded deposits at Aberdeen Bay, at Pangnirtung's Opingivik quarry, and at several locations southwest of Hall Beach. The Paniyuk Dyke, an undeveloped deposit of modest size, was confirmed near Coral Harbour. Smaller occurrences used by Chesterfield Inlet (Iqalukpilinnaaq at Cross Bay), Whale Cove (Akutjuaq at

Nevill Bay) and Arviat (Nabbaat at Kaminak Lake) are nearly depleted.

The program will continue in the North Baffin communities, as well as Baker Lake and Rankin Inlet, with community consultation and helicopter-supported evaluation of carving stone deposits during 2012 and 2013. The Kitikmeot communities will be evaluated in the final year (2013–14). The department is working with and reporting results back to Economic Development Officers, communities, the Nunavut Arts and Crafts Association, regional Inuit organizations, government and scientific agencies.

## MINERALS EDUCATION AND TRAINING

EDT works with many other stakeholders, including the GN Department of Education, the Government of Canada, and the mining and exploration industries, in a number of programs designed to inform all Nunavummiut of the opportunities in the mineral resources industries. EDT programs and initiatives include the Nunavut High School Math and Science Awards Program, the Independent Science Program for Youth (I-SPY) to support science-education camps and activities throughout Nunavut, the Mineral Exploration Field Assistant's Course (offered by Nunavut Arctic College), curriculum development for Nunavut schools, and Careers in Mining school and community presentations.



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*Panning near Whale Cove*

*Courtesy of the Government of Nunavut*



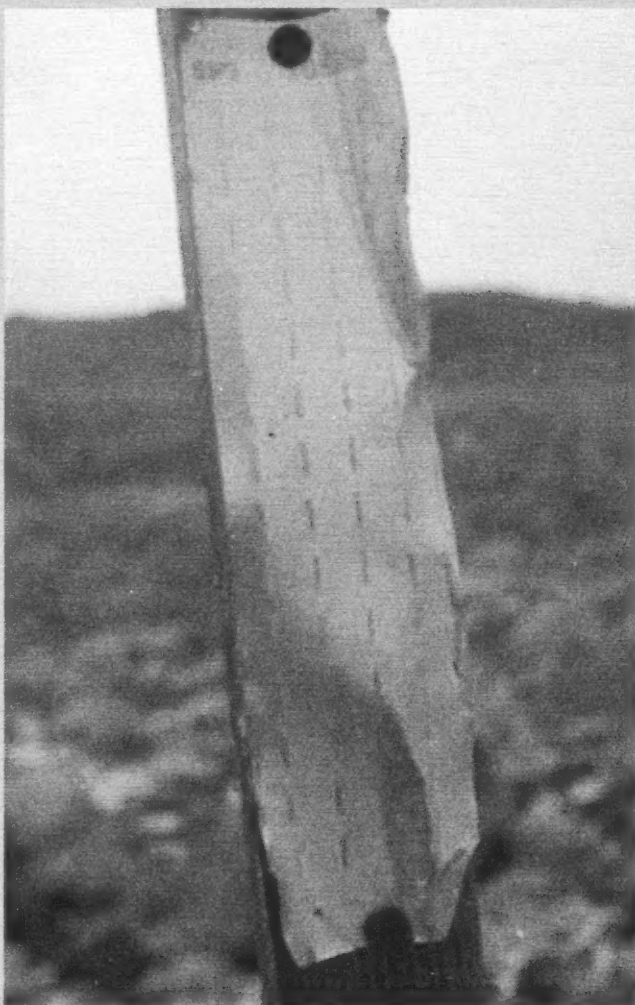
# NUNAVUT TUNNGAVIK INCORPORATED



Nunavut Tunngavik Incorporated (NTI) is the Inuit corporation responsible for overseeing implementation of the Nunavut Land Claims Agreement. NTI's mandate includes safeguarding, administering and advancing the rights and benefits of the Inuit of Nunavut to promote their economic,

social and cultural well-being through succeeding generations. The Lands and Resources Department of NTI, in cooperation with the three Regional Inuit Associations (RIAs) who are the surface owners of the Inuit Owned Lands (IOL) parcels, is responsible for the implementation of Inuit responsibilities related to the management of IOL, minerals, oil and gas, and marine areas.

*Historic claim post, near Nanisivik Mine  
Courtesy of AA/NDC*



NTI is the manager of the minerals for which Inuit are the fee simple title owners. For these minerals, NTI issues mineral rights through a negotiated Exploration Agreement (EA) that provides a holder the right, if it meets the terms of the EA, to receive a Mineral Production Lease that allows for mining a discovered resource.

NTI uses a map selection system for the acquisition of mineral rights. Interested parties submit to NTI an Expression of Interest which includes a map of the proposed exploration area. Expressions of Interest and subsequent correspondence and negotiation are kept confidential with NTI and the applicable RIA until required to be made public, typically upon signing of a Memorandum of Understanding between NTI and the applicant outlining the agreed terms upon which the EA will be developed.

Although the process described normally applies, NTI, as a private organization, has complete discretion as to whether it will issue an EA (or other agreement), what the process will be for obtaining an agreement, and what the terms of the agreement will be. The terms may include, for example, NTI holding a direct interest in a project or seeking additional benefits such as shares or milestone payments.

Under the standard terms, successful applicants, upon executing the new EA and submitting the first year's annual fees, will be granted the exclusive right to explore for minerals on the Exploration Area. In order to gain access to the land, however, the applicant must obtain a surface right issued by the RIA.

Holders of Exploration Agreements are required to submit annual exploration work reports to NTI that remain confidential for a period of up to three years.

## NTI URANIUM, MINING AND RECLAMATION POLICIES

NTI has developed a series of policies applicable to exploration and mining, specifically a general Mining Policy, a Uranium Policy, and a Reclamation Policy. The policies provide that NTI will support exploration and mining provided there are minimal negative environmental and socioeconomic impacts; that Inuit cultural and social needs are respected; that investment in Nunavut is encouraged; that land-use conflicts are resolved equitably; and that Inuit economic opportunities are maximized. The texts of all the policies are available from NTI.

# NUNAVUT TUNNGAVIK INCORPORATED

Project/Deposit	Holder(s)
<b>Kitikmeot Region</b>	
Hope Bay <sup>1</sup>	Hope Bay Mining Ltd.
Contwoyto	Shear Diamonds Ltd., Golden River Resources Corporation
Hood	Shear Diamonds Ltd., Golden River Resources Corporation
High Lake <sup>2</sup>	MMG Resources Inc.
Muskox <sup>3</sup>	Adriana Resources
Rockinghorse	Golden River Resources Corporation
Silvertip	North Arrow Minerals Inc.
<b>Kivalliq Region</b>	
Meliadine <sup>4</sup>	Agnico-Eagle Mines Ltd.
Meadowbank <sup>5</sup>	Agnico-Eagle Mines Ltd.
North Thelon Project/Ukalik	Forum Uranium Corp.
Churchill/Sedna	Shear Diamonds Ltd., 4579 Nunavut Ltd.
Cache	Alix Resources Corp.
Angilak/Lac Cinquante	Kivalliq Energy Corporation
Peter Lake	Canada Nickel Corp.
<b>Qikiqtani Region</b>	
Baffin Island Gold Project <sup>6</sup>	Commander Resources Ltd.
Mary River	Baffinland Iron Mines Corporation
Haig Inlet and SQ-05	McKinnon Prospecting Ltd., Canadian Orebodies Ltd.

Note: All projects referenced above are discussed in this report.

1. The Boston deposit is located on surface IOL, while the Doris, Madrid, South Patch, Naartok and Suluk are on subsurface IOL, distributed among grandfathered leases and NTI Exploration Agreements. Potential extension of the Boston deposit down-dip or along strike to the north will also be on subsurface IOL.
2. The project involves Crown land and land held under NTI Exploration Agreements and grandfathered leases.
3. The project involves Crown land, surface IOL, and subsurface IOL under NTI Exploration Agreements.
4. The project involves land held under NTI Exploration Agreements as well as grandfathered claims and leases.
5. The project involves land held under NTI Exploration Agreements and grandfathered leases.
6. The overall project involves Crown land and subsurface IOL.

## PROJECTS ON INUIT OWNED LANDS

Many of the advanced exploration projects in Nunavut fall on IOL parcels for which NTI is the mineral title owner. The adjacent table summarizes the current active Exploration Agreements and their locations.

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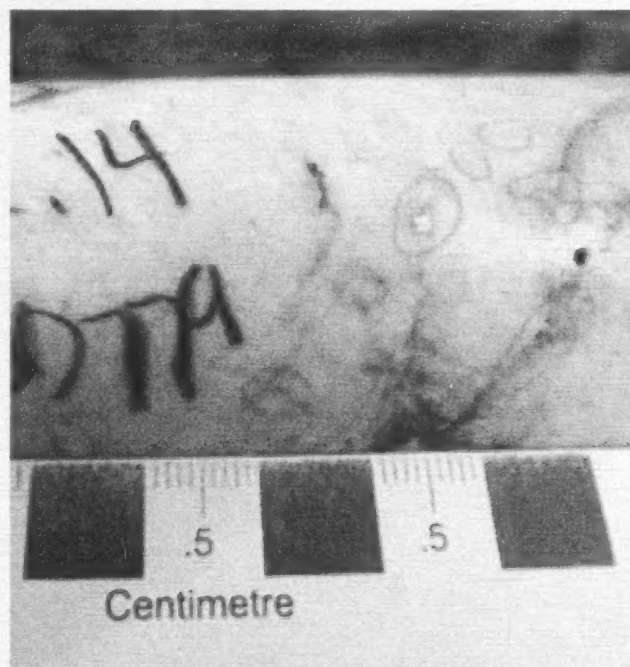
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Drill core with visible gold from Hope Bay  
Ownership of Hope Bay Mining







Development of Nunavut's mineral and energy resources, and the infrastructure required to service it and communities, forms an important foundation for the territory's economy. The Canada–Nunavut Geoscience Office (CNGO) was established in 1999 to help foster this development. It is a

partnership between Natural Resources Canada (NRCan), Aboriginal Affairs and Northern Development Canada, and the Government of Nunavut's (GN) Department of Economic Development and Transportation. Nunavut Tunngavik Incorporated is an ex-officio member of the office.

The mandate of CNGO is to provide geoscience information and expertise that supports: responsible resource exploration and development, education and training, and geoscience awareness and outreach. CNGO concentrates on new geoscience mapping and research, supporting geoscience capacity building, disseminating geoscience information and developing collaborative partnerships of strategic importance to Nunavut.

CNGO and collaborative geoscience initiatives conducted in partnership with universities and the Geo-mapping for Energy and Minerals (GEM) program, in 2011 include:

## MINERAL DISTRICT AND DEPOSIT STUDIES

### Elu Greenstone Belt, NE Slave Province

Hubert Mvondo and Dave Lentz (University of New Brunswick)

Hope Bay and Elu are two stratigraphically and structurally connected Neoproterozoic (ca. 2,800 to 2,500 million year-old (Ma)) greenstone belts in the NE Slave Craton. The Boston gold deposit, located at the intersection of the two belts, is bounded to the east by a migmatitic granitoid complex. The Boston mapping project is a collaborative effort with Newmont Mining Corporation and CNGO to study the timing between mineralization and tectonic evolution in the area east of the deposit.

The mineralization occurs principally near the contact between intrusions and their host rocks and relates to shear zones. Noticeable sulphide occurrences in mafic xenoliths show that they could represent reliable indicators for

exploration. Sulphide-rich veining occurs also along faults. New mapping indicates that Neoproterozoic to Proterozoic hydrothermal activity and metal remobilization occurred extensively east of the Boston gold deposit.

### Borden Basin Multiple Metals

Elizabeth Turner and Katie Hahn (Laurentian University)

The Borden Basin project is a multi-year project aimed at providing a modern understanding of the tectonostratigraphic evolution and economic potential of Mesoproterozoic sedimentary basins of northeastern Nunavut for renewed exploration in an area of historic mining activity (Nanisivik district).

With support from the Polar Continental Shelf Project, field activity in 2011 focused on the very large deep-water carbonate mounds of the Ikpiarjuk Formation. These mounds are hundreds of metres thick and kilometres in diameter and are associated with the upper Arctic Bay Formation of black shale and syndepositional faults. A new PhD student and assistant team spent five weeks mapping and establishing the stratigraphic context and depositional environments for two of the seven known mounds. Additional work is being conducted to understand the timing of mineralization and provide insight on the temperature and composition of mineralizing fluids at Nanisivik.

Publication output included: a paper in *Economic Geology* that addresses spatial controls on the distribution of known carbonate-hosted base-metal showings in the Borden Basin based on stratigraphic and structural mapping; submission of a paper to *Precambrian Research* describing the results of a study on base-metal potential of black shale in the Arctic Bay Formation; and a journal paper on uranium potential at the base of the Mesoproterozoic successions has been accepted in *Precambrian Research*.

*Irregular base of a Mesoproterozoic deep-water carbonate mound (the Red Rock Valley mound, near Nanisivik) overlies black shale of the upper Arctic Bay Formation.*

*Courtesy of Laurentian University*



# CANADA-NUNAVUT GEOSCIENCE OFFICE

## REGIONAL GEOSCIENCE

### **3** Cumberland Peninsula Integrated Geoscience Project - GEM

*Mary Sanborn-Barrie (Geological Survey of Canada);  
Mike Young (Dalhousie University)*

The Cumberland Peninsula project is providing new geoscience knowledge for eastern Baffin Island, an under-explored frontier region of Canada's north. This GEM project is now at an advanced stage, having acquired and released more than 62,000 line-kilometres (km) of high-resolution aeromagnetic data (GSC Open Files 6086-6103), completed regional 1:100,000 scale surficial and bedrock mapping (2009 to 2010), and gained regional geochemical, geochronological, structural and assay data (2009 to 2011). Collectively, new geologic knowledge has stimulated mineral exploration in the project area, provides relevant public geoscience information, and is resolving questions regarding Cumberland Peninsula's economic potential.

It is now recognized that an ancient 2.8 to 3.0 billion year-old (Ga) tonalitic basement underlies about half of Cumberland Peninsula. Tectonically juxtaposed with the basement are 1.95 to 1.9 Ga cover rocks of the Paleoproterozoic Hoare Bay group, and a potentially upper, rift-related sequence of chert, graphitic schist, iron formation and mafic and ultramafic volcanic rocks. Elevated concentrations of multiple metals in the metavolcanic assemblage present an exploration target for copper-nickel-gold. A 200-km long belt of 1.89 Ga granitic rocks, which form the topographically spectacular mountains showcased in Auyuittuq National Park, is intrusive into both basement and cover rocks.

Project activities in 2011 focused on completion of all bedrock and surficial maps, acquisition of strategic value-added data, and targeted mapping of the northeastern volcanic-bearing corridor. To this end, three new 1:100,000

scale bedrock geology maps of southern Cumberland Peninsula, released in June 2011 (GSC Canadian Geoscience Map (CGM) 1-3) and six surficial maps released in October 2011 (GSC CGM 15-20), provided guidance to ongoing mineral exploration. A workshop on diamonds and kimberlites, delivered in July 2011 to interested residents of Pangnirtung and Qikiqtarjuaq, contributed to an understanding of Nunavut's emerging diamond potential.

### **4** Hudson Bay-Foxe Basin Energy Project - GEM

*Shunxin Zhang (Canada-Nunavut Geoscience Office);  
Denis Lavoie (Geological Survey of Canada)*

Hudson Bay and Foxe Basin are two large Paleozoic sedimentary basins located in the Qikiqtaaluk and Kivalliq regions of eastern Nunavut. Their petroleum potential is unknown. In 2007, CNGO began a Nunavut Energy Project focusing on the Paleozoic stratigraphy and petroleum potential of Hudson Bay. This project was integrated into the GEM Hudson Bay-Foxe Basin project in 2009.

Following the successful field and post-field research on Southampton Island at the north margin of Hudson Bay Basin, and on Melville Peninsula at the northwest margin of Foxe Basin, new field work was conducted in 2011 on southern Baffin Island to expand the research area to the southeast Foxe Basin. The goals of this work are: to better understand the Paleozoic stratigraphy on southern Baffin Island; to provide a stratigraphic correlation between Hudson Bay Basin and Foxe Basin; and to assess the petroleum potential in Foxe Basin.

Preliminary field data has established the stratigraphic position of the oil shale interval in the Upper Ordovician age lower Amadjuak Formation on southern Baffin Island. This oil shale interval is about two metres thick with a total organic carbon content averaging eight per cent. Observations were also made that demonstrated that the oil shale changed

*Totnes Road Peninsula  
Courtesy of GSC*





laterally into non-oil shale and identified another low-yield interval in the Forster Bay Formation, at a higher stratigraphic level that has been subsequently eroded away.

#### **5 Hall Peninsula Integrated Geoscience Program**

*David Mate, Gabriel Machado, Tommy Tremblay, Rosemarie Khoun and Shunxin Zhang (Canada-Nunavut Geoscience Office); Martin Ross and Cassia Johnson (University of Waterloo)*

The Hall Peninsula Integrated Geoscience Program is being led by CNGO and will be delivered in collaboration with partners from universities, industry and federal and territorial governments. The study area comprises all or parts of nine National Topographic Scale (NTS) (scale 1:250,000) map sheets north and east of Iqaluit. Reconnaissance field work was conducted by CNGO during the summer of 2011. The most intensive work will be conducted in NTS map sheets 250 and 26B.

Field mapping is planned for 2012 and 2013 with activities to include: regional bedrock mapping, an assessment of mineral potential and regional tectonics, mapping and sampling of surficial materials, and permafrost and terrain stability research. This work builds on MSc research at the University of Waterloo on subglacial erosion, transportation, and deposition on northeastern Hall Peninsula. It includes detailed mapping, collection of meso- and micro-scale ice flow indicators, and understanding glacial erosion intensity using cosmogenic dating. Such a comprehensive approach to drift prospecting has rarely been applied in the Canadian Arctic.

#### **6 Melville Peninsula Multiple Metals Project - GEM**

*Gabriel Machado (Canada-Nunavut Geoscience Office); David Corrigan, Leopold Nadeau, Janet Campbell, Isabelle McMartin and Michel Houlé (Geological Survey of Canada)*

In 2011, the third and final field season of the GEM Melville Peninsula Project was completed. Focus was on the completion of detailed bedrock mapping of the Archean-age Prince Albert Group in its type locality in the Prince Albert Hills of western Melville Peninsula, as well as surficial geology mapping and till sampling on the mainland within and west of the Rae Isthmus. The bedrock mapping effort builds on previous mapping that was completed on parts of the Prince Albert greenstone belt in 2010. Preliminary radiometric ages from rhyolite suggest that the belt is at least 300 Ma older than Archean supracrustal rocks of the Rae Province that occur along strike to the southwest, suggesting that a revision of the regional stratigraphic model is required. In addition to known iron deposits, new evidence for magmatic nickel-copper mineralization (GSC Open File 6729) and volcanogenic massive sulphide type Ag-Zn-Pb-Cu±Au mineralization, highlights the economic potential of the Prince Albert greenstone belt.

Considerable effort was directed at identifying outliers from the greenstone belt that occur elsewhere in the region, some

of which appear to broadly coincide with elevated base-metal levels in till samples. A number of detailed stratigraphic sections were also completed in the Paleoproterozoic Folster Lake Formation, representing the remnant of a moderately deformed and metamorphosed sedimentary basin sequence deposited on the Archean basement. A new detailed bedrock geology map of the northern extents of the Prince Albert greenstone belt, as well as a regional 1:250,000 scale geology map (for NTS 47B), are being prepared.

#### **7 Northeast Thelon Basin Uranium Project - GEM**

*Charlie Jefferson and Eric Potter (Geological Survey of Canada)*

The Geological Survey of Canada is testing the hypothesis that world class uranium deposit knowledge from Saskatchewan can be adapted to Nunavut. Knowledge of basement rocks that underlie sedimentary basins is required to test this hypothesis because deposits are located in the basement near the covering strata. Geological mapping improves knowledge under and around the basins. Integrated geophysical data is providing new information about the basement rocks beneath an extensive cover of surficial deposits. In regions northwest and south of Baker Lake, collaboration with 12

*Cumberland Sound and Hall Peninsula glaciers  
Courtesy of CNGO*

*Old claim post in area of Prince Albert greenstone belt, Melville Peninsula  
Courtesy of GEM*



# CANADA-NUNAVUT GEOSCIENCE OFFICE

companies and 10 universities is integrating industry and new government-acquired geophysics with geology and satellite imagery, and is training young scientists. Compilations (GSC Open Files 6510, 6862, 6944, 6949 and 6950) and other publications are building comprehensive legacy databases.

The Kiggavik deposits, west of Baker Lake, are in a 2.8 to 1.75 Ga basement complex of interlayered and interfolded sedimentary and volcanic sequences transected by two periods of potassium rich intrusions. Hydrothermal fluids carried uranium along intersecting steep faults, altered the basement rocks to soft clay and iron oxide minerals, and formed uranium deposits at about 1.6 to 1.4 Ga near small 1.75 Ga granite bodies. Similar faults developed and preserved overlying sedimentary and volcanic basins from about 1.83 to 1.5 Ga. Parallel new knowledge of the Lac Cinquante district south of Baker Lake, and of the Beaverlodge and Athabasca districts in Saskatchewan, is informing stakeholders about uranium resource potential in Nunavut.

## AGGREGATE AND INDUSTRIAL MINERALS

**Nunavut Aggregate Resource Mapping and Assessment**  
*Serge Basso and David Mate (Canada-Nunavut Geoscience Office); Roy Green and Bu Lam (Government of Nunavut)*

Sufficient quantity and variety of high-quality granular material provides the basis for infrastructure development and the economic well-being of every community in Nunavut. Aggregate resources (sand and gravel) are used for the construction of roads and air strips, but also for gravel pads

*Arrowhead fly camp*  
*Courtesy of GSC*



that insulate underlying permafrost and provide erosion control features to buildings and other infrastructure. This multi-year project is focused on locating, mapping and describing aggregate resources near communities to create an inventory to assist development in the territory.

In 2011, the focus of the project was on the development of Nunavut's first aggregate resource database. This involves developing a web application, accessible through [www.nunavutgeoscience.ca](http://www.nunavutgeoscience.ca), that will enable users to browse, download and submit aggregate resource reports and maps. Such a tool will benefit community and infrastructure development in the territory and help focus work on identifying new aggregate resources.

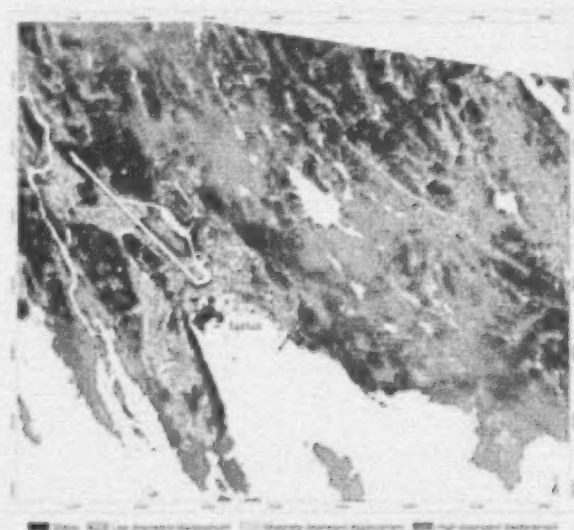
## GEOSCIENCE FOR INFRASTRUCTURE

### Iqaluit Permafrost and Terrain Study

*Anne-Marie Leblanc (Geological Survey of Canada); Naomi Short (Canada Centre for Remote Sensing); Michel Allard (Université Laval); David Mate (Canada-Nunavut Geoscience Office)*

The city of Iqaluit is growing rapidly and consists of key strategic infrastructure including its airport which is the gateway to the eastern Canadian Arctic. The city and its infrastructure are underlain by continuous permafrost that is now warming and thawing in places. In order to reduce the risk to investments in northern resource development that these changes pose, a joint CNGO, Université Laval and NRCan (GSC and Canada Centre for Remote Sensing) study on the sensitivity of permafrost and terrain conditions within the city began in 2010.

*InSAR image of seasonal ground displacement in the Iqaluit area*  
*Courtesy of CCRG*



Recent results have demonstrated a clear link between original terrain units, permafrost features and the problems currently affecting infrastructure. Surficial geological mapping of the Iqaluit airport shows that it was built over a dense network of ice wedge polygons and that pre-existing lakes and streams were filled to build embankments for the runway, taxiways and apron. Many of the permafrost-related problems that exist can be linked to these pre-construction features.

Satellite interferometric synthetic aperture radar (InSAR) observations were collected over Iqaluit and the airport to detect ground displacements and assess terrain stability. These observations correlate very well with the mapped terrain units. Stable ground occurs in areas underlain by bedrock and till (e.g. the Plateau subdivision) whereas areas with differential thaw settlement are visible in older parts of the city that are built on old glaciomarine sands and silts. Since 2010, several permafrost temperature monitoring sites have been installed in the urban area, at the airport, and in natural, undisturbed landscapes to characterize ground thermal regimes and measure thaw settlements. Results from this integrated work will help government, community and industry stakeholders better understand landscape constraints for building infrastructure.

## DATA DISSEMINATION

### Kimberlite Indicator Information for Nunavut

*Rosemarie Khoun (Canada-Nunavut Geoscience Office)  
and Aleksandar Miskovic (Aboriginal Affairs and Northern  
Development Canada – Northwest Territories Office)*

CNGO, in collaboration with the Northwest Territories Geoscience Office (NTGO), has made available new kimberlite indicator information for Nunavut to assist exploration companies and advance Northern economic development. A Kimberlite Indicator Database (KIDD) and Kimberlite Indicator Chemistry Database (KIMC) for Nunavut can now be accessed through the NTGO website ([www.nwtgeoscience.ca](http://www.nwtgeoscience.ca)).

KIDD information has been gathered from assessment reports containing kimberlite indicator mineral data, including the sample location and the counts of visually picked mineral grains. The searchable Nunavut KIDD database currently contains 70,711 records. The KIMC database is an extension of the KIDD database, consisting of mineral chemistry from electron-microprobe analysis of select kimberlite indicator minerals. A total of 1,726 KIMC laboratory records for Nunavut can now be accessed.

Note: Numbers refer to Geological Mapping programs outlined in pink boxes on the *Nunavut Mineral Exploration, Mining, and Geoscience Active Projects 2011 Map*.

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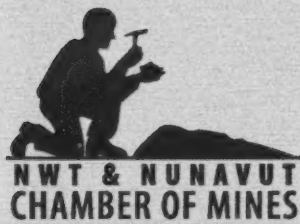
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**Nunavut Geoscience Data**  
[www.nunavutgeoscience.ca](http://www.nunavutgeoscience.ca)



# NWT & NUNAVUT CHAMBER OF MINES



The NWT & Nunavut Chamber of Mines is the leading advocate for mining and mineral development in the Northwest Territories and Nunavut. Its key objectives are to:

- encourage, assist and stimulate prosperous, orderly and environmentally responsible development and growth of mining and mineral exploration, in all modes and phases, in the Northwest Territories and Nunavut;
- inform the public of matters relating to mining and minerals exploration; and
- cooperate with and seek the cooperation of all persons, associations, corporations and authorities, both public and private, to attain these objectives.

## The Chamber of Mines:

- is industry's voice and advocate for sustainable mineral development, ensuring a balanced and workable approach to regulations, regulatory reform, protected areas, and mineral policy;
- is the liaison between industry, governments and regulators on land access, employment, and infrastructure development;
- helps educate business and the public about the critical role of mining in providing the essentials and luxuries of everyday life;
- encourages the development of a skilled mining labour force through promotion of mining careers and training;
- encourages and supports networking and business opportunities among northern businesses; and
- builds relationships between mining and exploration companies and suppliers, governments, regulators, and Aboriginal groups.

## ESTABLISHING A NUNAVUT PRESENCE

Since division of the two territories in 1999, the NWT & Nunavut Chamber of Mines has worked on behalf of Nunavut interests from its Yellowknife office. Given the mounting interest in exploration in Nunavut, the strong support for mining from Nunavummiut, and the increasing number of

Chamber members with operations throughout the territory, the time had come to establish a new office in Nunavut. That office was announced in April 2011, and received national recognition when the Prime Minister of Canada announced government support for the Iqaluit office in August 2011. Elizabeth Kingston, a resident of Iqaluit, is the first General Manager.

Building an effective Chamber of Mines requires a great deal of support, particularly from individual and corporate members, and the many others who believe in the power of the mining industry to make a difference. The Canadian Northern Economic Development Agency (CanNor), Aboriginal Affairs and Northern Development Canada, and the Government of Nunavut have all been very supportive in making the Nunavut office a reality.

Through the Chamber, various levels of government receive valuable input on government policy and legislation. Government can seek advice on a variety of initiatives that strengthen industry's contributions to Nunavut and Canada, through training, employment and business with Nunavummiut, with supplying infrastructure, and in providing critical and significant revenues.

The first ever mining association office in Nunavut is an exciting foray into the expanding northern minerals industry. The Chamber looks forward to many years working with Nunavummiut to create and maintain a strong and vibrant Nunavut minerals industry that serves the interests of Nunavut and Canada.

*Ice on Committee Bay  
Courtesy of CNM*



## NWT & NUNAVUT CHAMBER OF MINES

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*Cloudberry bush, Maguse property  
Courtesy of IronOne Inc.*



*Frobisher Bay as seen from Hall Peninsula  
Courtesy of CNCO*



# KITIKMEOT REGION

## OVERVIEW

The Kitikmeot region covers an area of 446,728 square kilometres (km<sup>2</sup>) and includes the northwestern portion of the Nunavut mainland, King William Island, the southern half of Prince of Wales Island and the southern and eastern parts of Victoria Island. The two largest communities in the Kitikmeot, Cambridge Bay and Kugluktuk, provide support and services for exploration projects. Gjoa Haven, Taloyoak and Kugaaruk are the other communities in the region and are located in the east. As many of the projects in this region are concentrated in the southwestern part of the region, Yellowknife, NWT, is also an important supply and logistical centre.

The Kitikmeot region is located within the Canadian Shield, and is underlain by rocks of Archean and Proterozoic age, comprising portions of the Slave, Bear and Churchill geological provinces. Paleozoic strata of the Arctic Platform underlie the northern portion of the region. Gold, base metals, diamonds, platinum group elements and uranium were the main commodities of interest in 2011.

Exploration in the Kitikmeot in 2011 was dominated by activities of the mid-tier to major mining companies. Hope Bay Mining Ltd. (a subsidiary of Newmont Mining Corporation) was most active, with a budget of \$147 million to develop its Hope Bay gold project and the Doris North deposit. Regional exploration was conducted on the deposits of the Madrid Trend and the Boston gold deposit within the Hope Bay greenstone belt. Substantial drilling programs were also carried out by Sabina Gold & Silver Corp. on its Back River gold project and by North Country Gold Inc. on its Committee Bay gold project.

Two significant transactions occurred in 2011 that had an impact on the ownership of two large projects in the Kitikmeot region. Sabina sold its silver-rich volcanogenic massive sulphide (VMS) Hackett River property to Xstrata Zinc Canada and MMG Resources Inc. sold the past-producing Lupin gold mine and Ulu gold deposit to Elgin Mining Inc.

Five of the 106 prospecting permits issued in 2011 are located in the Kitikmeot region.

*Jericho open pit*  
Courtesy of Shear Diamonds





# Kitikmeot Region

50 25 0 50 100  
Kilometres

Projection: Canada Lambert Conformal Conic, NAD 83

Müller  
Ice Cap  
AXEL  
HEIRERG

## LEGEND

### Commodity Groupings

- Base Metals
- Coal
- Diamond
- Gemstone
- Gold
- Iron
- Lithium
- Nickel-Copper-PGE
- Rare Earth Elements
- Uranium
- Active Mine
- Inactive Mine

Symbol with no fill means INACTIVE  
Bold project number and name signifies major or advancing project.

### Areas with Surface and/or Subsurface Restrictions

- CPMA Caribou Protection Measures Apply
- MBS Migratory Bird Sanctuary
- NP National Park
- NWA National Wildlife Area
- TP Territorial Park
- WP Wildlife Preserve
- WS Wildlife Sanctuary

### Inuit Owned Lands (Fee simple title)

- Surface Only
- Surface and Subsurface

### Geological Mapping Programs

- Canada-Nunavut Geoscience Office (See master legend for details)

### Boundaries

- NLCA Nunavut Settlement Area
- Nunavut Regions
- NILCA Nunavik Settlement Area
- Provincial / Territorial

### Transportation Routes

- Meadowbank Road
- Mine Inlet Tote Road
- Yellowknife-Contwoyo Winter Road
- Proposed Bathurst Inlet Port and Road
- Proposed Steensby Inlet Rail Line

PARRY ISLANDS

MELVILLE ISLAND

VICTORIA ISLAND

PRINCE OF WALES ISLAND

NORTHWEST TERRITORIES  
TERRITOIRES DU NORD-OUEST  
YELLOWKNIFE

Chesterfield Inlet

# KITIKMEOT REGION

## BASE METALS

### BASE METALS

100	105	GONDOR <sup>1</sup> , HOOD <sup>2</sup>
Operator/Partner		MMG Resources Inc. <sup>1</sup> , Xstrata Zinc Canada <sup>2</sup>
Commodities		Copper, Lead, Zinc <sup>1</sup> ; Copper, Zinc <sup>2</sup>
NTS		76E/05, 76E/12, 86H/07, 86H/08, 86H/09 <sup>1</sup> ; 86I/02 <sup>2</sup>
Location		225 km southwest of Bathurst Inlet <sup>1</sup> ; 220 km south of Kugluktuk <sup>2</sup>

The Gondor and Hood deposits were acquired by MMG Resources in 2009 with the Izok Lake base metal deposit. Both the Gondor and Hood deposits are viewed as potential sources for additional ore should Izok Lake go into production.

The Gondor deposit is located southeast of Izok Lake near the Nunavut-Northwest Territories border. The deposit hosts volcanogenic copper-lead-zinc massive sulphide mineralization with accessory silver and gold. Gondor was discovered in the 1970s, and has been explored intermittently since that time. The deposit is located in the Slave Province and is hosted within a sequence of tuffs and lapilli tuffs. Mineralization at Gondor comprises two steeply- to sub-vertical-dipping limbs of massive to disseminated sulphides. The dominant sulphide minerals are pyrite and sphalerite. A historic, non-National Instrument 43-101 (NI 43-101) compliant resource estimates 4.38 million tonnes at 0.1% Cu, 1.2% Pb, 9.7% Zn, 0.78 grams per tonne (g/t) Au and 64.60 g/t Ag within the deposit. The deposit remains open in all directions and at depth.

MMG conducted airborne and ground geophysics over portions of the Gondor property in 2010, along with prospecting and till sampling. No work was done in 2011.

The Hood property lies within the Hood River Supracrustal belt northeast of Izok Lake. Multiple showings and deposits have been known on the property since the 1970s. Three of these deposits have had non-NI 43-101 compliant resource estimates published. Work at Hood by MMG in 2011 consisted of sampling along the western felsic/sedimentary rock contact and a detailed gravity survey performed over two square kilometres of the contact area. The sampling focused on areas of rock and soil with a sodium-depletion; this depletion appears to be associated with anomalous base

Hackett drill core



metal values. The results from the sampling program are pending. Re-logging of historic core was also done on the property as part of a Masters thesis.

101	107	HACKETT RIVER <sup>1</sup> , WISHBONE <sup>2</sup>
Operator/Owner		Xstrata Zinc Canada
Commodities		Silver, Zinc, Gold, Copper, Lead
NTS		76F/15, 76F/16 <sup>1</sup> ; 76F/01, 76F/08 – 76F/10, 76G/03 – 76G/06, 76G/12, 76G/13, 76J/04, 76K/01, 76K/02
Location		100 km south-southwest of Bathurst Inlet <sup>1</sup> ; 170 km south of Bathurst Inlet <sup>2</sup>

The Hackett River silver-rich VMS project is located within the Wishbone greenstone belt in the southern Kitikmeot region. In mid-2011, the Hackett River property and a large portion of the surrounding Wishbone claim group were sold to Xstrata Zinc Canada in exchange for a cash payment and a royalty on future silver production.

The Hackett River project consists of three main silver/zinc-rich deposits: Main Zone, Boot and East Cleaver; as well as a satellite deposit, the JO Zone. All the deposits are located within a 2 km by 5 km window, along the contact between underlying felsic volcanics and overlying pelitic sediments. Two small additional deposits, the Watson and May Zones, are located between 10 and 15 km east-southeast of the main

# KITIKMEOT REGION

## BASE METALS

deposits.

Hackett River is considered one of the largest undeveloped silver-zinc VMS projects in the world. In late 2009, an updated Preliminary Economic Assessment was completed on the project, with indicated resources totalling 43.30 million tonnes with grades of 4.65% Zn, 144 g/t Ag, 0.42% Cu, 0.64% Pb and 0.30 g/t Au. An additional inferred resource totalling 14.60 million tonnes with grades of 4.46% Zn, 136 g/t Ag, 0.31% Cu, 0.57% Pb and 0.31 g/t Au is also contained at Hackett River. The deposits are precious metals-rich with approximately 45% of the value of the resource in silver. The 12,000 tonnes per day mining model outlined in the Preliminary Economic Assessment envisions the production of three payable concentrates, with potential production of 13.00 million ounces of silver and 370 million pounds of zinc per year over 16 years through open pit and underground extraction.

During 2011, exploration activities at Hackett River occurred in a two stage, multi-phase program. Beginning in 2010, and extending into 2011, work concentrated on looking for opportunities to increase the mill throughput and extend the open pit life of the operation. Early in 2011, Sabina carried out a 42 hole (10,200 metre (m)) drill program concentrated on expanding the East Cleaver and Main Zone deposits, as well as satellite deposits proximal to them. All work on Hackett River ceased in early June, when the agreement with Xstrata Zinc Canada was announced. Subsequent work by Sabina moved to the Wishbone gold claims which will remain with Sabina.

Work at Hackett River focused on infill drilling to close large gaps in the 2009 resource model at Main Zone and at East Cleaver. The initial drilling at Main Zone and Main Zone East focused on shallow targets located within the proposed pits. Two drill holes, SHR-11-01 and SHR-11-03, were drilled at the southern end of the deposit. Drill hole SHR-11-01 intersected significantly higher grades returning 268 g/t Ag, 0.52 g/t Au and 6.26% Zn over 21.70 m at a down-hole depth of 122.10 m. Included were a 0.90 m interval that graded 929 g/t Ag and 4.71 g/t Au and a second, 0.70 m interval that

graded 1,095 g/t Ag and 1.02 g/t Au. Drill hole SHR-11-03 returned 141 g/t Ag, 3.65% Zn and 1.09% Cu over 43.90 m at a down-hole depth of 70.40 m. Included was a 16.80 m interval that graded 266 g/t Ag and 9.03% Zn.

At the north end of Main Zone East, holes were drilled to target a 100 m-wide area where historical information was unreliable. A number of mineralized zones were intersected over a 110.65 m section including 285 g/t Ag, 4.03 g/t Au and 2.65% Zn over 11.30 m (which also included a 1.30 m interval that graded 1,500 g/t Ag and 33.00 g/t Au) and 325 g/t Ag and 0.82 g/t Au over 8.35 m.

Newly released data continues to highlight the previously untested copper stringer mineralization. Most of these significant copper results show up immediately beneath the proposed, ultimate pit shell as defined in the 2009 resource model.

Drilling at East Cleaver returned 134 g/t Ag and 5.47% Zn over 99.75 m starting at a down-hole depth of only 5.0 m. This interval included a silver-rich copper stringer zone which graded 298 g/t Ag, 0.52 g/t Au and 1.10% Cu over 10.45 m and a zinc-rich massive sulphide interval that graded 264 g/t Ag and 11.73% Zn over 10.90 m. Subsequent drilling at East Cleaver was focused on further defining the extent of the mineralized zones, with emphasis on the South Limb of the folded deposit, Knob Hill and at depth between the two limbs.

Overall, the 2011 drilling at Hackett further increased the extent of the known deposits, both within the massive sulphide, and in the footwall copper stringer zones; and increased the understanding of the complex alteration and structural geometry of the East Cleaver and Main Zones.

In 2011, Sabina Gold & Silver Corp. announced the sale to Xstrata Zinc Canada of the Hackett River property, along with portions of the surrounding Wishbone project. The 3,000 km<sup>2</sup> Wishbone claims surround the Hackett mineral leases, and extend more than 70 km south of Hackett River. Most of the Wishbone property was transferred to Xstrata as part of the transaction, but Sabina retained the claims it viewed as

*Sunset on Committee Bay  
Courtesy of UNICO*





# KITIKMEOT REGION

## BASE METALS and DIAMONDS

prospective for banded iron formation-hosted gold mineralization. Additional claims were staked by both Xstrata and Sabina which increased the overall extent of the Wishbone property. Since the sale, Sabina has expanded its Wishbone property by staking 74 additional claims totalling more than 60,000 hectares (ha).

103 <sup>1</sup>	104	106 <sup>3</sup>	HIGH LAKE <sup>1</sup> , HIGH LAKE EAST <sup>2</sup> , IZOK LAKE <sup>3</sup>
Operator/Owner	MMG Resources Inc.		
Commodities	Copper, Zinc, Silver, Gold <sup>1</sup> ; Copper, Zinc, Silver, Gold <sup>2</sup> ; Copper, Zinc, Lead, Silver <sup>3</sup>		
NTS	76M/07, 76M/10 <sup>1</sup> ; 76M/01, 76M/08, 76N/04, 76N/05 <sup>2</sup> ; 86H/10, 86H/11, 86H/14 <sup>3</sup>		
Location	135 km northwest of Bathurst Inlet <sup>1</sup> , 96 km northwest of Bathurst Inlet <sup>2</sup> , 250 km southwest of Bathurst Inlet <sup>3</sup>		

MMG Resources continued work at its Izok Lake and High Lake projects in 2011. Both projects host high-grade base metal mineralization in VMS deposits.

The Izok Lake property sits near the Nunavut-Northwest Territories border and comprises six mining leases covering an area of 8,855 ha, as well as a larger block of claims spanning the border. The Izok Lake deposit hosts high-grade zinc-copper-lead-silver mineralization; a NI 43-101-compliant resource estimate indicates that the deposit includes 14.40 million tonnes of indicated resources grading 12.7% Zn, 2.5% Cu, 1.3% Pb and 70.50 g/t Ag, with a further 369,000 tonnes of inferred resources with an average grade of 6.4% Zn, 3.79% Cu, 0.27% Pb and 54 g/t Ag.

Work at Izok Lake in 2011 was principally focused on drill testing geophysical and geological targets south of the main deposits. Two diamond drills completed 15,108 m of drilling in 42 holes. Down-hole electromagnetic surveys were performed on all drill holes. The drilling intersected several new intervals with stringer sulphide mineralization and one-to-two metre widths of zinc-rich VMS sulphide. Significant results include drill hole HEN-471 which intersected 4.07% Cu, 3.73% Zn and 60 g/t Ag over 11.26 m; drill hole HEN-468 which intersected 0.90 m of 30% Zn, 2.06% Pb and 69 g/t Ag; and drill hole HEN-453 which returned results of 22.8% Zn, 4.48% Pb and 216 g/t Ag over 2.45 m.

A 3-D induced polarization survey was completed over an area 18 km<sup>2</sup> southwest of the deposits. The survey was interpreted to resolve structural features to a depth of 400 m, and identified high-chargeability anomalies which will require follow-up. A gravity survey was also conducted on a regional scale and at a more detailed scale around the main deposits. The results of this survey will assist in stratigraphic interpretation and defining drill targets.

Other surface work included detailed mapping over an area southeast of the Izok Lake deposits and till sampling southwest of the deposits to analyze for metamorphosed massive sulphide indicator minerals.

The High Lake property is located 135 km northwest of Bathurst Inlet. The High Lake deposit contains copper-zinc-silver-gold mineralization, and is hosted within the same sequence of rocks as the Izok Lake deposit. The NI 43-101 resource estimate published for the High Lake deposit in 2008 gives an indicated resource of 17.20 million tonnes grading 3.35% Zn, 2.25% Cu, 0.31% Pb, 70 g/t Ag, and 0.95 g/t Au. Work at High Lake in 2011 was again focused on the High Lake East area, located 35 km southeast of the main deposit. No details from this work have been released.



## DIAMONDS

160	AMARUK
Operator/Owner	Diamonds North Resources Ltd.
Commodity	Diamonds
NTS	560/13 - 560/15, 57A/02 - 57A/07, 57A/11, 57A/12
Location	45 km southwest of Kugaaruk

Amaruk is a multi-commodity property 100 per cent-owned by Diamonds North and is located southwest of Kugaaruk in the eastern Kitikmeot region. In addition to diamonds, the property is being explored for gold and nickel-copper-platinum group elements (Ni-Cu-PGE). In 2010, the company signed a letter of agreement with MMG Resources Inc. to allow MMG to earn an interest in any nickel and other base metals discovered on the property.

In December 2010, Diamonds North reported on the results

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## DIAMONDS

for the Amaruk diamonds project; a bulk sample had been taken from the Beluga-3 kimberlite, a target with a low magnetic response. The 19-tonne sample yielded a total of 82 diamonds, of which five were greater than 1.70 mm. These stones are the largest found to date on the property. As a result of this work, Diamonds North has focused its drilling efforts on targets with a low-magnetic response.

Further exploration demonstrated that electromagnetic airborne surveys were useful in locating kimberlite as electromagnetic responses were not affected by conductive overburden. Targets identified as prospective kimberlite locations from an airborne survey were confirmed with the discovery of kimberlite indicator minerals (KIM) on the ground. This EM data has allowed for the identification of targets for follow-up sampling. No results from the 2011 season have been reported.

161	BARROW
Operator/ Partners	Diamonds North Resources Ltd., Indicator Minerals Inc., Hunter Exploration Group
Commodity	Diamonds
NTS	57A/07
Location	25 km south of Kugaaruk

The Barrow diamond project is located in the eastern Kitikmeot region adjacent to Diamonds North multi-commodity Amaruk project. The last reported work on Barrow occurred during 2008, when a \$1.3 million drill program tested five geophysical anomalies but did not intersect kimberlite. Heavy-mineral sampling at that time returned concentrations of KIM that evidence indicated came from a local source. A 25.5 kilogram (kg) kimberlite boulder was also discovered that returned 176 diamonds.

In 2011, Diamonds North Resources signed an option agreement with Indicator Minerals to acquire up to a 60 per cent interest in the Barrow property. Although no work was reported at Barrow this year, Diamonds North committed to spend a minimum of \$50,000 by December 31, 2011 to comply with the terms of the option agreement.

162	HAMMER
Operator/Partner	Stornoway Diamond Corporation, North Arrow Minerals Inc.
Commodity	Diamonds
NTS	86I/15
Location	140 km southeast of Kugluktuk

The Hammer property lies within the Coronation Gulf/North Slave diamond-bearing area. The property covers 1,014 ha of claims and is a joint venture between Stornoway Diamond Corporation as the operator and 75 per cent owner with partner North Arrow Minerals Inc. who owns 25 per cent. In 2010, ground geophysical surveys outlined the Hammer kimberlite as having a 0.4 ha surface expression located at a topographic depression. This depression was previously suspected as the source region of a KIM train with diamond-bearing characteristics. Kimberlite float and weathered kimberlite breccia collected from surface pits were analyzed for microdiamonds by caustic fusion. The recovery of one microdiamond from a six kilogram sample confirmed the diamondiferous nature of the kimberlite.

Exploration in 2011 was focused on establishing the kimberlite's dimensions and retrieving a large volume of kimberlite for an initial diamond grade determination. A \$1.3 million drilling and sampling program completed 21 drill holes (1,800 m) to delineate the extents of the body. The presence

*A thunderstorm rolls in while a geologist logs core at the Hammer project*  
COURTESY OF STORNOWAY DIAMOND CORPORATION



# KITIKMEOT REGION

## DIAMONDS

of kimberlite to a minimum depth of 200 m was determined. An additional 930 m of kimberlite core was collected for logging and diamond analyses.

Kimberlite recovered from Hammer is described as a variably-bedded, olivine-rich volcanoclastic unit. Approximately 200 kg of core was submitted for microdiamond analysis and an additional 3.4 tonnes of core will be processed for macrodiamond recovery using a dense media separation process. At press time, diamond results had not been reported.

Adjacent to the Hammer property, drift prospecting for KIM has indicated the presence of other kimberlites nearby. Stornoway collected follow-up till samples in these areas in 2011 and discovered kimberlite float material. Drilling two short drill holes to locate the source area of the Eokuk indicator mineral train did not intersect any kimberlite.

Stornoway holds interests in several other Nunavut diamond projects within the same diamond district. In October 2011, the company stated its intentions to expand its exploration portfolio and intends to conduct multiple drilling programs during 2012.

163	JERICO MINE
Operator/Owner	Shear Diamonds Ltd.
Commodity	Diamonds
NTS	76E/13, 76E/14, 76L/03, 76L/04, 86H/16, 86I/01
Location	180 km southwest of Bathurst Inlet

In 2010, Shear Diamonds Ltd. (formerly Shear Minerals Ltd.) purchased the past-producing Jericho diamond mine and surrounding Carat property formerly held by Tahera Diamond Corporation and Benachee Resources Inc. The Jericho project includes more than 62,300 ha of mineral tenure, including eight mining leases and a contiguous block of mineral claims including 34 new claims (31,200 ha) staked in 2011.

The objectives of the 2011 program were to confirm and expand the current resource of the Jericho kimberlite complex, to explore for new diamondiferous kimberlites proximal to the mine site, and to complete an updated NI 43-101 resource estimate for the property. The company

Geologist logging core at Jericho  
Courtesy of Shear Diamonds



also worked with consultants on the development of a new geological model for Jericho using detailed petrographic analyses, re-logging results of historical core and the results of the 2011 drilling. Based on this work, 12 kimberlite types and 13 domains were defined, and a 3-D geological model was created of the kimberlites that Shear has termed the Jericho kimberlite complex. As part of the \$4.6 million 2011 budget, five drill holes (total 1,246.5 m) were drilled into the kimberlite complex to assist in resolving kimberlite contacts and to provide data for the revised geological model. Four of the five drill holes intersected kimberlite not previously known or included in the current geological model.

Two ground geophysical surveys, consisting of 455.7 line-km of magnetometer and 55.7 line-km of electromagnetic surveys, were conducted in the spring over 35 targets on the Carat property. Based on the results of the surveys, 11 targets were identified as high-priority anomalies for drill testing. Only three targets were drilled this year and none of the three holes intersected kimberlite. One anomaly was due to faulted country rock, and the remaining two anomalies were interpreted as representing magnetic country rock.

Shear Diamonds also announced its intention to de-water the Jericho pit, and to commence performance tests at the diamond recovery plant. As part of these tests, 200.85 carats of diamonds were extracted from 22.1 wet tonnes of the recovery rejects stockpile and coarse-processed kimberlite, including 14 stones greater than 0.5 carats. The largest diamond recovered was 1.907 carats.



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DIAMONDS and GOLD

164	ROCKINGHORSE
Operator/Partner	Shear Diamonds Ltd., Rio Tinto Exploration Canada Inc.
Commodity	Diamonds
NTS	86I/10, 86I/11, 86I/14
Location	165 km southeast of Kugluktuk

As part of the purchase of the past-producing Jericho diamond mine, Shear Diamonds Ltd. also acquired a 75 per cent stake in the Rockinghorse project; the remaining 25 per cent is owned by Rio Tinto Exploration Canada Inc. The project includes the Anuri kimberlite discovered in 2001. This kimberlite includes a western lobe and an eastern lobe, with dimensions of 225 m by 150 m and 100 m by 100 m, respectively.

The last reported work on the property was in 2007, when a past operator completed 17 large-diameter drill holes targeting the Anuri kimberlite. Approximately 3,500 m of the 4,029 m drilling intersected kimberlite, and a 25.6 dry tonne mini-bulk sample was collected, but not processed, from the kimberlite core. Early in 2011, Shear and Rio Tinto completed processing this sample, and reported diamond recoveries of 0.35 carats per tonne. The five largest diamonds recovered were between 0.26 and 0.54 carats. Based on these results, Shear and Rio Tinto are determining how to proceed with further evaluation of the Anuri kimberlite.

*Geologist on outcrop*  
Courtesy of MMR Resources

## GOLD

220	AMARUK GOLD
Operator/Owner	Diamonds North Resources Ltd.
Commodity	Gold
NTS	560/13 - 560/15, 57A/02 - 57A/07, 57A/11, 57A/12
Location	45 km southwest of Kugaaruk

The Amaruk Gold project is part of the multi-commodity Amaruk property located south west of Kugaaruk. The Amaruk Gold project includes the DEL, Far East, West Formation, Garnet, and PB4 showings and prospects.

The DEL showing is approximately 15 km long, and comprises an eastern and a western zone. The eastern zone is approximately nine km long, and gold mineralization is contained in two sulphide-rich banded iron formation units. The western zone is approximately six km long, and contains mineralized banded iron formation as well as metasedimentary gossans containing anomalous values of gold, silver and copper.

Two other high-interest gold prospects at Amaruk are the Far East and Garnet showings. Anomalous gold values were returned from 23 of 87 samples collected in the 2010 field season over the Far East showing. The Garnet showing was



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discovered in 2009, after analyses of reverse circulation (RC) drill-chip samples from a kimberlite target returned 1.42 g/t Au over 1.50 m, and 0.56 g/t Au over 4.60 m. The showing was formerly known as PB2 and is part of a larger prospect called the West Formation, located in the southwest part of Amaruk.

Diamonds North's 2011 exploration program at Amaruk began in August, with the intent to continue exploration and sampling of the DEL and Far East showings. As outcrop exposure on the DEL prospect is less than 10%, a small hand-held drill was used to test various sites around the prospect, including iron formations that were identified through airborne geophysics. No results from the 2011 field season have been reported.

221 <sup>1</sup>	222 <sup>2</sup>	BACK RIVER (GOOSE LAKE <sup>1</sup> , GEORGE LAKE <sup>2</sup> )
Operator/Owner		Sabina Gold & Silver Corp.
Commodity		Gold
NTS		76G/09, 76G/10 <sup>1</sup> ; 76G/13, 76G/14, 76J/03, 76J/04 <sup>2</sup>
Location		110 km south of Bathurst Inlet <sup>1</sup> , 160 km south-southeast of Bathurst Inlet <sup>2</sup>

The Back River project comprises seven properties: Boot Lake, Boulder Pond, Del Lake, George Lake, Goose Lake, Malley Rapids and Needle. The properties are known to host multiple deposits and occurrences of banded iron formation-hosted gold mineralization. Most recent exploration has been focused on the Goose Lake property, which includes the Goose, Llama and Umwelt deposits, and at George Lake.

*Drill at Umwelt on Goose property*  
Courtesy of Sabina Gold & Silver



In 2011, Sabina spent approximately \$30 million, including 61,600 m of drilling, exploring the Back River property. The primary focus of the program was to expand and extend the Llama and Umwelt deposits on the Goose Lake property, with additional efforts directed towards the discovery of new deposits within the George Lake claim block.

Past resource estimates for the Goose deposit were optimized for an underground mining scenario. Drilling at the deposit in 2011 was intended to address previous gaps in the knowledge of the deposit and to aid in the evaluation of Goose as an open-pit mine. Notably, one drill hole returned a result of 18.99 g/t Au over 27.20 m at a vertical depth of 170 m from an area in the centre of the deposit that was previously thought to be barren.

Much of the work on the Goose Lake property in 2011 was focused on the Umwelt deposit where gold mineralization is associated with arsenopyrite found with quartz and quartz-carbonate veining. The mineralized zones are hosted within a turbiditic sedimentary sequence containing silicate and oxide-facies iron formations. The dimensions of the deposit were extended to more than 1.15 km along strike and to a vertical depth of 550 m. Umwelt has a plunge-length of 1.5 km, and consistently plunges -25° to the south.

Umwelt's G2 zone was discovered during the 2011 program, at the southernmost extent of drilling on the deposit. The zone occurs at a vertical depth of approximately 600 m, and remains open down-dip and down-plunge to the south. Results from this zone include 14.24 g/t Au over 28.25 m in one drill hole and 9.48 g/t Au over 29.85 m from another drill hole.

Drilling at the Llama zone focused on in-filling gaps in the resource model and on expansion of the deposit along strike and down-plunge. Highlights include one drill hole that intersected 8.79 g/t Au over 5.00 m, and another that intersected 10.88 g/t Au over 9.80 m. This latter drill hole also intersected the Flying Wedge zone, immediately to the west of Llama, at the lower base of a thick iron formation. This zone returned an assay value of 1.42 g/t Au over 17.50 m, including 3.54 g/t Au over 5.00 m. Based on the drilling completed, the strike-length of the Llama deposit was extended 100 m to the south. However, the complicated geology at Llama and limited success from drilling at the deposit led to the re-assignment of Llama's drills to other targets during the latter part of the 2011 season.

Two other targets drilled on the Goose Lake property include the Camp Zone and Goose Neck. The Camp Zone, located 400 m northeast of the main Goose deposit, returned an assay



George Lake camp  
Courtesy of AMICO

value of 2.12 g/t Au over 13.45 m. The Goose Neck target is located midway between the Goose and Umwelt deposits and is comprised of a thickened silicified and sulphidized oxide-facies iron formation. The Goose Neck mineralized zone has a strike-length of 175 m and extends to a depth of at least 220 m, with a best result of 3.44 g/t Au over 10.25 m.

Exploration on the George Lake property was focused on identifying targets with similar alteration and geology to the Llama and Umwelt deposits, with the intent of outlining further deposits amenable to open pit extraction. Two of the targets explored were the Trigger and Lookout Hill showings. One hole drilled into the Trigger showing intersected multiple intercepts of gold-mineralized brecciated, silicified and sulphidized sediments hosted within oxide iron formation. The best intercept returned from this drill hole assayed 9.12 g/t Au over 6.00 m. The Lookout Hill target is interpreted to be similar to the Llama deposit, and consists of moderately folded oxide iron formation with quartz veining, shear-controlled sulphide mineralization and visible gold. The best result reported from this zone is 5.14 g/t Au over 16.00 m.

In March 2011, initial resource estimates were published for Umwelt and Llama; revised estimates including the 2011 results were subsequently released in November. The proposed open pit mine at Umwelt is estimated to have indicated resources of 6.53 million tonnes grading 4.89 g/t Au and inferred resources of 1.16 million tonnes grading 4.00 g/t Au. Underground mining at Umwelt is estimated to be able to extract 4.41 million tonnes of indicated resources grading 5.31 g/t Au, and a further 4.33 million tonnes of inferred resources grading 4.75 g/t Au. For Llama, indicated resources are estimated at 1.86 million tonnes grading 9.41 g/t Au with inferred resources of 981,000 tonnes grading 5.71 g/t Au indicated.

A new resource estimate was published for the Goose deposit in September, which reinterpreted the deposit for open pit mining rather than underground extraction. The new estimate gives an indicated resource of 7.70 million tonnes grading 4.45 g/t Au, an open pit-based inferred resource of 0.40

million tonnes grading 3.53 g/t Au, and an underground-based inferred resource of 0.60 million tonnes grading 5.81 g/t. In total, the Back River project now includes more than 4.00 million ounces of gold in the indicated category from both open pit and underground operations, and more than 2.00 million ounces in the inferred category.

Sabina initiated a Preliminary Economic Assessment of the Back River project, which will comprise the reinterpreted Goose Lake resource, the existing George Lake resource, and updated resources for Umwelt and Llama deposits including 2011 results. The study is anticipated to be completed early in 2012. Pending positive results, a Preliminary Project Description will be filed with the Nunavut Water Board to enter the project into the permitting process.

<div>223 224 225</div> <div>226 227</div> <div>COMMITTEE BAY GOLD (ANURI<sup>1</sup>, INUK<sup>2</sup>, RAVEN<sup>3</sup>, THREE BLUFFS<sup>4</sup>, WEST PLAINS<sup>5</sup>)</div>	
Operator/Owner	North Country Gold Corp.
Commodity	Gold
NTS	56P/06, 56P/07; 56J/10 - 56J/16; 56K/07 - 56K/10; 56K/02, 56K/03, 56K/06; 56K/06, 56K/07, 56K/10, 56K/11
Location	265 km south-southwest of Kugaaruk <sup>1</sup> , 135 km south of Kugaaruk <sup>2</sup> , 260 km southwest of Kugaaruk <sup>3</sup> , 220 km south of Kugaaruk <sup>4</sup> , 250 km northeast of Baker Lake <sup>5</sup>

North Country Gold conducted an aggressive exploration program on its Committee Bay project in 2011. The \$25 million program focused on resource delineation and expansion along the 4.1-km Walker Lake trend comprising a



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series of rocks that contains the Three Bluffs and Antler gold deposits. Five diamond drills were used to define potential open-pit resources, with drill holes at 50 m by 50 m spacing to a vertical depth of 200 m along the Walker Lake trend. One RC drill was used to test mineralized gold zones along the length of the Walker Lake trend to assist in determining diamond drill hole targets.

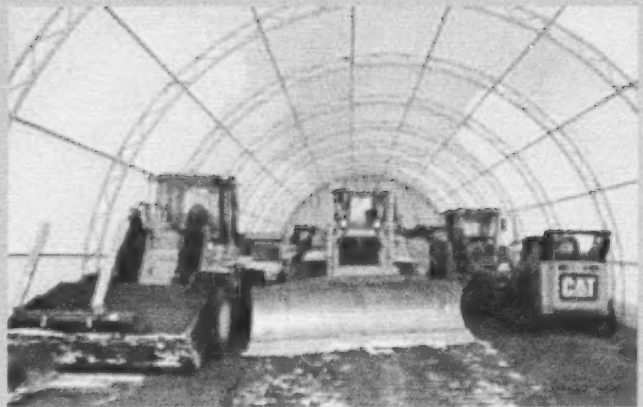
A combination of RC and core drilling was used to evaluate the Three Bluffs and Three Bluffs West zones. Results at Three Bluffs returned values of up to 8.06 g/t Au over 30.49 m from an RC drill hole and 7.34 g/t Au over 25.00 m from core. Values of 43.02 g/t Au over 4.00 m were encountered at Three Bluffs West. The strike-length of the Three Bluffs zone has been increased to more than 1.3 km as a result of the 2011 drilling, and gold mineralization has been confirmed to depths of at least 200 m below surface.

Widely-spaced RC drill holes were drilled into Antler in 2011. This drilling extended the zone by 360 m to the west. Gold mineralization at the Antler zone has been defined over more than one km of strike-length and to a depth down-dip of 100 to 150 m. Diamond drill holes completed in the zone confirmed the presence of east-plunging high-grade ore shoots, from which grades of up to 7.58 g/t Au over 9.48 m and up to 3.89 g/t Au over 7.62 m have been returned.

The gap between the Three Bluffs West and Antler zones was also tested during the program. Five widely-spaced RC drill holes indicate this gap may be continuously mineralized. Results from this drilling include 8.67 g/t Au over 4.57 m and 2.44 g/t Au over 6.09 m. Interpretation of a geophysical survey completed in 2010 suggests that high-grade gold mineralization along the Walker Lake trend correlates with resistivity lows. A number of these geophysical anomalies were identified at depth in the gap. One drill hole targeted an anomaly that returned a result of 4.35 g/t Au over 10.00 m at a vertical depth of 300 m below surface. This result suggests there is further potential in this area below the current drilling.

North Country Gold also completed a property-wide prospecting program along the 300 km-long Committee Bay greenstone belt. Approximately 50 of the 921 grab samples collected returned anomalous results in excess of 150 parts per billion gold. The sampling extended three previously known gold targets: Naqsaq, Maro and Prospector, located 75 km northeast, 45 km southwest and 17 km north of the Three Bluffs deposit, respectively. As part of the surface exploration program, a detailed ground magnetic survey comprising 32 line-km was completed west of the Hayes prospect, along the western strike-extension of the Walker Lake trend. The survey

Heavy equipment storage  
Courtesy of North Country Gold



confirmed that the mineralized unit encountered at Three Bluffs, Antler and Hayes extends for at least another 1.5 km to the west. The results of this survey will assist in drill-targeting in 2012.

Site improvement work was also completed in 2011 at the Hayes camp in support of current and future activities within the project area. This work expanded the capacity of the camp to 100 people and upgraded the gravel airstrip adjacent to the camp to allow for larger aircraft to land. Other upgrades included the construction of a bulk fuel handling facility, two structures that will serve as a machine shop and a core processing facility, and the installation of an all-season, automated water supply system to provide water for drilling along the Walker Lake trend. The necessary permits are now in place to allow for the construction of a 10 km-long road to connect Hayes camp to the Three Bluffs deposit; construction on the road should begin in 2012.

228	ELU BELT
Operator/Owner	Hope Bay Mining Ltd.
Commodity	Gold
NTS	77A/02, 77A/07, 77A/10
Location	95 km south-southwest of Cambridge Bay

Hope Bay Mining Ltd., a 100 per cent-owned subsidiary of Newmont Mining Corp., acquired mineral tenure in the Elu greenstone belt which is separated from the analogous Hope Bay greenstone belt to the west by a 30-km wide mafic metaplutonic complex. The Elu belt is comprised of mafic and

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felsic volcanics with minor sediments, and exhibits similar iron carbonate alteration and quartz vein systems to the Hope Bay belt. Historical work has identified various styles of sulphide mineralization in the Elu belt that may be prospective for gold, copper and zinc mineralization.

The company is conducting reconnaissance exploration aimed at evaluating known gold occurrences and to identify potential new base and precious metal targets. No results from assays or other information about the program have been reported.

229	HALKETT INLET GOLD
Operator/Owner	Diamonds North Resources Ltd.
Commodity	Gold
NTS	57A/13, 57D/03 - 57D/06, 57D/11
Location	100 km northwest of Kugaaruk

The Halkett Inlet gold property covers 365,000 ha and is located northwest of the hamlet of Kugaaruk. There are two prospective showings, HI-1 and HI-2, on the property.

HI-1 showing comprises a series of gold-mineralized quartz-feldspar dikes that cross-cut existing mafic and felsic units; these units are adjacent to a younger felsic intrusion. Sampling from this showing in 2010 returned assay results of up to 3.59 g/t Au from a grab sample, and 7.92 g/t Au over 4.25 m from continuous chip sampling. The anomalous zone is at least 165 m long and is located inside a 450 m by 100 m

Doris camp  
Courtesy of the Government of Nunavut



oxidized quartz-feldspar-porphyry dike swarm.

HI-2 showing is a gold-mineralized, sulphide-rich iron formation that has been intensely folded. The showing was identified when analyses of prospecting and grab samples returned values greater than 0.50 g/t Au in three samples. The area also has zones of strongly-altered gossans which correlate closely with interpreted aeromagnetic anomalies. The prospect was originally identified as having at least six areas with anomalous gold values, although in January 2011, Diamonds North announced the additional discoveries of 10 high-priority gold targets on HI-2. The targets are located along a 55-km zone of highly magnetic banded iron formation, 25 km away from the HI-1 prospect.

Regional prospecting, mapping, and reconnaissance drilling were planned for the 2011 season. No results from assays or other information about the program have been reported.

231 232 233 234	HOPE BAY (BOSTON, CHICAGO, DORIS, MADRID)
Operator/Owner	Hope Bay Mining Ltd.
Commodity	Gold
NTS	760/08, 760/09, 760/10, 760/15, 760/16, 77A/03
Location	170 km southwest of Cambridge Bay, 100 km northeast of Bathurst Inlet, 125 km southwest of Cambridge Bay, 130 km southwest of Cambridge Bay

The Hope Bay project is owned by Hope Bay Mining Ltd., a 100 per cent-owned subsidiary of Newmont Mining Corporation. The project area is made up of a collection of Crown mineral leases, mineral claims and Nunavut Tunngavik Incorporated Exploration Agreements. The Hope Bay project covers most of the Hope Bay greenstone belt, 80 km in length and between seven and 20 km in width.

The project area sits within the Bathurst structural block of the northeast Slave Province. The Hope Bay greenstone belt and its deposits are classified as Archean lode gold-type. The belt is isoclinally folded with belt-parallel shear zones; gold deposits in the belt are associated with large-scale regional structures. The Hope Bay project includes the Doris and Boston deposits, the Madrid Trend and its deposits, and

# KITIKMEOT REGION

## GOLD

several other regional targets. It is estimated that the entire Hope Bay project has the potential to produce ten million ounces of gold.

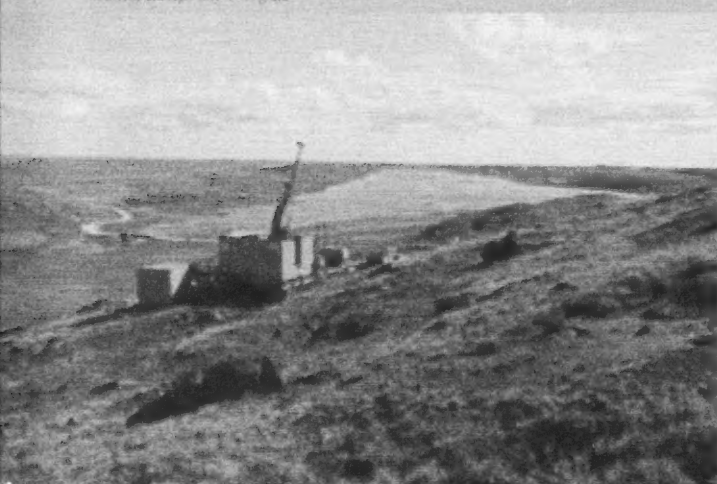
The Doris deposits include Doris North, Doris Lower, Doris Connector and Doris Central. Gold mineralization occurs within a steeply-dipping quartz vein system in folded and metamorphosed pillow basalts. At the north end of the Doris North deposit, the veins have been folded into a doubly-plunging anticline. This deposit comprises the near-surface, high-grade hinge zone of this anticline, and is separated from the Doris Lower deposit by an unmineralized diabase dike.

The Madrid Trend in the central portion of the Hope Bay belt hosts a number of deposits and mineralized zones, including Naartok East and West, Rand, Spur, Marianas, Bend, Suluk, Suluk South, Patch 7, Patch 14 and Wolverine. Most of the exploration in this area during 2010 and 2011 focused on Patch 14 and Wolverine. Gold mineralization within the Madrid Trend is lithologically and structurally controlled and occurs adjacent to a distinct structural feature — the Madrid deformation zone.

The Boston deposit is located in the southern portion of the Hope Bay belt, and includes four zones of mineralization. The geology comprises a series of sedimentary and volcanic sequences, with the mineralization found in complexly deformed quartz-carbonate veins.

Hope Bay Mining is committed to a phased development approach for the Hope Bay district. Phase 1 includes development of the Doris deposits and an exploration decline at Patch 14 to support a bulk sample. Phase 2 includes belt-wide production with mining at Boston and within the Madrid Trend. An initial mine at Doris North is already permitted; the company plans to submit a Project Description for Phase 2 of the project to regulatory organizations by the end of 2011.

*Diamond drill at Hope Bay*  
*Courtesy of Hope Bay Mining Ltd.*



Exploration and development at the project had a budget of more than \$147 million in 2011. The work program included continued development of the underground operation at Doris North, approximately 91,000 m of drilling across the project, and further exploration consisting of geological mapping and geophysical surveys. New camp facilities were also mobilized to the Windy camp site close to the Madrid Trend; exploration staff currently housed at the Doris Camp will be relocated to the new site in 2012.

236	237	LUPIN MINE, ULU <sup>®</sup>
Operator/Owner		Elgin Mining Inc.
Commodity		Gold
NTS		76E/11, 76E/14 <sup>1</sup> ; 76L/14 <sup>1</sup>
Location		188 km southwest of Bathurst Inlet <sup>1</sup> , 130 km west of Bathurst Inlet <sup>1</sup>

In 2011, Elgin Mining Inc. completed the indirect acquisition of the Lupin gold mine and Ulu gold deposit from MMG Resources Inc. The Lupin deposit was discovered in 1961, and was in production from 1982 to 1998, and again from 2000 to 2005. Total past production is estimated at 3.37 million ounces of gold at an average grade of 7.34 g/t. It is estimated that a resource of 400,000 ounces of gold remained at the time of mine closure.

Gold mineralization at Lupin is hosted in banded iron formation units within turbiditic sediments of the Archean Contwoyto Formation. In the past, gold exploration on the site was focused on areas that returned high responses to magnetic and electromagnetic geophysical surveys. Recent work has shown that the main Lupin mineralization and other gold-bearing occurrences on the site give minimal responses using these techniques, suggesting that past interpretations may have been flawed. Elgin Mining also notes similarities between the geological setting and geophysical characteristics at Lupin and at Sabina Gold and Silver Corp.'s Back River project.

Elgin Mining completed winterization of the Lupin camp facilities to allow for year-round exploration, and is currently exploring for at- or near-surface gold deposits within the iron formation. The company is performing ground magnetic and EM surveys over all identified targets to better delineate



Lake at Lupin Mine  
Courtesy of ANNOG

the banded iron formation, other structural features, and any variations in magnetism in the targets. The geophysical surveys are being complemented by mapping and sampling of the targets to build on historic data in the area. The company began drill testing targets in October with one drill, and plans to add up to three additional drills in 2012.

The Ulu gold deposit, is located 155 km north of the former Lupin mine. Gold mineralization at Ulu is found within shear-hosted quartz veins. The deposit has a NI 43-101-compliant indicated resource of 751,000 tonnes at 11.37 g/t Au, and an inferred resource of 418,000 tonnes at an average grade of 10.61 g/t Au. The Ulu deposit remains open at depth below the 360 m level. Although no production mining occurred at Ulu, approximately 1.7 km of underground workings were established by past-owner Wolfden Resources.

In addition to the Ulu deposit, there are a number of historic gold showings known on the property including the Flood Zone which intercepted high-grade volcanogenic massive sulphide copper-zinc-silver-gold mineralization.

230	ORO
Operator, Partner	North Arrow Minerals Inc., Sennen Resources Ltd.
Commodity	Gold
NTS	77A/03
Location	117 km southwest of Cambridge Bay

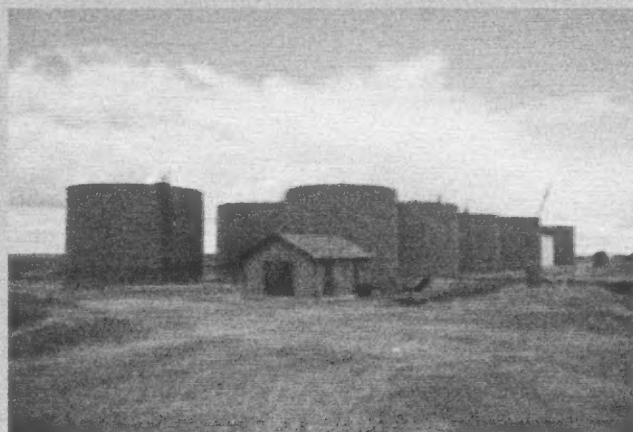
The Oro property is 100 per cent-owned by North Arrow, with an option for Sennen to earn a 60 per cent interest by funding a \$5.0 million exploration program over five years. The property consists of five mining leases, covering an area of 4,047 ha and lies five kilometres north of the Doris North

deposit operated by Hope Bay Mining Ltd. The Oro property hosts the northern 10 km extent of the Hope Bay greenstone belt.

Exploration activities in 2011 tested the potential of gold mineralization along a 300 m strike-length of the prospective Elu shear zone. An 11-hole drilling program totalling 1,225 m was completed; 10 drill holes intersected the Elu shear zone and all contained significant gold mineralization. Drill hole 11-HB-04 returned 4.00 m at 7.04 g/t Au and drill hole 11-HB-10 yielded 20.22 g/t Au over 2.00 m. The northern most drill hole encountered foliated quartz-feldspar porphyry with sericitic alteration, quartz-carbonate veins and sulphide mineralization. The remaining drill holes to the south intersected the Elu shear and splays within a sequence of Archean mafic volcanics, indicating the shear zone is not constrained by lithostratigraphy.

Results from shallow surface drilling confirm the northern continuity of gold mineralization associated with the Elu shear zone. Gold potential is open to the north, south and down-dip of drilling completed to date. Additional exploration including further drilling, prospecting and surface sampling is required to fully outline the extent of gold mineralization and to identify other gold zones.

Tank farm Lupin Mine  
Courtesy of ANNOG



# KITIKMEOT REGION

## GOLD

236	TURNER LAKE
Operator/Owner	Northrock Resources Inc.
Commodities	Gold, Copper, Nickel, Platinum, Palladium
NTS	76N/02
Location	57 km northwest of Bathurst Inlet

The Turner Lake project comprises four mineral claims northwest of Bathurst Inlet. Several showings are known on the property but the main focus of work has been on the Main Gold Zone. Northrock Resources drilled the property in 2008 and 2009 with positive results. The company returned in 2011 and conducted limited sampling of pegmatite to evaluate the rocks for rare earth element potential. No results from analyses have been released.

238	WISHBONE GOLD
Operator/Owner	Sabina Gold & Silver Corp.
Commodities	Copper, Silver, Zinc, Lead, Gold
NTS	76F/09, 76F/16, 76G/05, 76G/06, 76G/11, 76G/12, 76G/13
Location	140 km south of Bathurst Inlet

In 2011, Sabina Gold & Silver Corp. announced the sale to Xstrata Zinc Canada of Sabina's silver-rich VMS Hackett River property, along with portions of the surrounding Wishbone project. Most of the Wishbone property was transferred to Xstrata as part of the transaction, but Sabina retained the claims it viewed as prospective for banded iron formation-hosted gold mineralization. Since the sale, Sabina has expanded its Wishbone property by staking 74 additional claims totalling more than 60,000 ha.

The 2011 exploration program at Wishbone focused on the Rocky and Bullwinkle showings. Work planned for the property included mapping, prospecting and ground geophysics, in addition to 7,500 m of diamond drilling. The final drilling total was more than originally forecast, with 11,629 m completed in 44 drill holes. The company also undertook frost boil and lake sediment sampling on the property.

The Lucky 7 target was discovered in 2011 within the Bullwinkle area. At Lucky 7, drill hole SWB-11-07 targeted a regionally extensive horizon that can be traced for more than 60 km. Two zones of gold mineralization were intersected; the first consists of an altered fault gouge zone with shearing and quartz veining containing up to five per cent pyrite and pyrrhotite; and the second zone consists of silica-rich breccia fragments in a quartz-feldspar-biotite-pyrrhotite matrix. The two zones returned grades of 71.30 g/t Au over 1.50 m and 3.35 g/t Au over 14.65 m, respectively.

Two of the drill holes completed in the Rocky area intersected gold mineralization in strongly pyrrhotite-mineralized silicate and oxide iron formation. Drill hole SWB-11-10 returned values of 1.04 g/t Au over 7.20 m, and 1.07 g/t Au over 34.15 m. Drill hole SWB-11-11, located 375 m northeast of the previous drill hole, intersected 0.92 g/t Au over 6.40 m and 0.83 g/t Au over 26.20 m. An electromagnetic geophysical anomaly associated with this mineralization can be traced over a length of more than one kilometre. A second set of geophysical anomalies in the Rocky area can be traced over a length of three kilometres.

Sabina plans work in 2012 to further evaluate the two discoveries and to test other geophysical, geochemical and geological anomalies on the property.

*Disembarking from helicopter near caribou tracks in sand  
Courtesy of MMG*



# KITIKMEOT REGION

NICKEL/COPPER/PLATINUM GROUP ELEMENTS (PGE) and URANIUM

## NICKEL/COPPER/PLATINUM GROUP ELEMENTS (PGE)

310 AMARUK NICKEL	
Operator/Partner	MMG Resources Inc., Diamonds North Resources Ltd.
Commodities	Nickel, Copper, Cobalt
NTS	560/13 - 560/15, 57A/02 - 57A/07, 57A/11, 57A/12
Location	45 km southwest of Kugaaruk

Amaruk Nickel is the third component of the Amaruk multi-commodity property located southwest of Kugaaruk. Nickel and base metals exploration on the property is primarily funded by MMG Resources Inc. MMG has the option to earn a 75 per cent interest in nickel and any other base metals on the property by spending \$6.0 million on exploration and preparing pre-feasibility studies on any potential deposits. To date, MMG has spent a total of \$3.9 million on the property, including \$1.65 million budgeted for the 2011 field season.

Much of the Ni-Cu-PGE exploration at Amaruk is concentrated on the Tunerq prospect. Results from previous exploration have included a drill target that assayed 2.49% Ni, 0.26% Cu, and 0.05% Co in a 9.10 m zone, which itself was part of a larger 36.10 m zone that returned results of 1.05% Ni, 0.26% Cu, and 0.02% Co.

The 2011 field program included a 5,000 line-km airborne electromagnetic survey of the area to determine targets for

further drill testing, particularly those targets with mafic-ultramafic bodies and nickel-copper geochemical anomalies. Lake-bottom sediment sampling was performed on anomalous targets identified from the geophysical survey. No results from the 2011 season have been released.

## URANIUM

370 COPPERMINE	
Operator/Owner	Hornby Bay Mineral Exploration Ltd.
Commodity	Uranium
NTS	86J/12, 86J/13, 86J/14, 86N/01, 86O/04, 86K/16
Location	100 km south-southwest of Kugluktuk

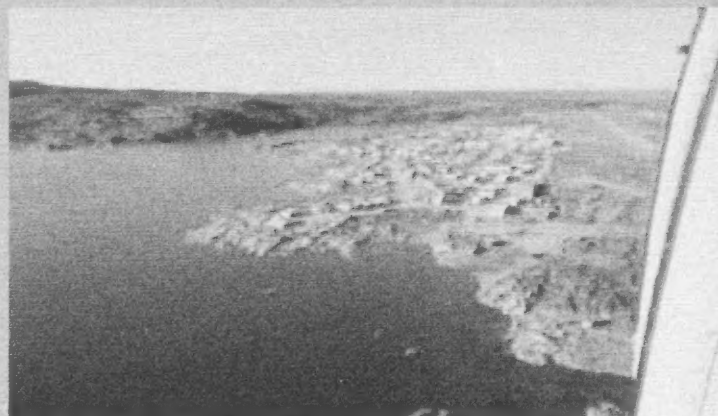
The Coppermine project is 100 per cent-owned by Hornby Bay Mineral Exploration Ltd. (HBME, formerly UNOR Inc.), and consists of 16 mineral claims and 39 mineral leases totaling 47,725 ha. The company has been exploring the property since 2004 for unconformity-type uranium mineralization found within the Proterozoic Hornby Bay Group. To date, 71 drill holes for a total of 19,233 m have been completed by HBME on the property.

The company planned to conduct a large-scale seismic survey in 2011 to assist with drill-targeting, but was not able to proceed due to difficulties securing financing. The survey is now planned for 2012.

Amaquak Formation  
Country of Nunavut



Kugaaruk  
Country of Nunavut





# KITIKMEOT REGION

## INACTIVE PROJECTS

### INACTIVE PROJECTS

The mineral tenure at three of North Arrow Minerals Inc.'s projects was maintained in 2011, but no work was completed. The project list includes the **Anialik** base metal-gold project; the **Canoe Lake** base metal-gold project, under option to MMG Resources Inc.; and the **Torp Lake** lithium project.

The **Blue Caribou** copper-molybdenum-silver-gold-rhenium project is controlled by Skybridge Development Corp., a 100 per cent-owned subsidiary of Mega Precious Metals Inc. The last reported work on the property took place in 2008.

Xstrata Zinc Canada controls the **Musk** project, a copper-zinc-silver-gold volcanogenic massive sulphide deposit located on a single mineral lease. The property is located within the Hackett River greenstone belt adjacent to the Wishbone property.

Strongbow Exploration Inc. controls the **Silvertip** gold-silver-lead-zinc project. The mineral tenure at the project remains in good standing, but no work has been reported from the property since the then-joint venture partner, North Arrow Minerals, conducted a drill program in 2008.

The **Yava** copper-lead-zinc-silver-gold project comprises one mineral lease and sixteen claims, and is owned by Savant Explorations Ltd. The property is located within the Hackett River greenstone belt. The last reported work on the property was in 2007, but the mineral tenure remains in good standing. Savant's management continues to look for a partner to undertake a full evaluation of the project.

Indicator Minerals Inc. and the Hunter Exploration Group control two diamond properties, Darby and Grail, in the eastern Kitikmeot region; both of these properties remained inactive in 2011. The **Darby** project was last optioned to Teck Resources Limited, who had the option to earn a 51 per cent share in the property by spending \$14 million as of December 2010. It has not been reported whether this earning target was met. The **Grail** project is located on the Boothia Peninsula.

Five diamond properties controlled by Diamonds North Resources Ltd. remained inactive in 2011: **Hepburn**, **Sakari**, **Siku**, **Ualliq** and **Victoria Island**. Although no diamond exploration has occurred recently at Hepburn, the company did conduct base metal exploration in the NWT portion of the property in 2011. The Sakari, Siku and Ualliq projects are subject to option agreements with Shear Diamonds Ltd., Arctic Star Diamond Corp. and International Samuel Exploration Corp., respectively. No exploration has been reported on any of the projects.

No work was reported in 2011 from four gold projects located on Inuit Owned Land (IOL) subsurface parcels in the western Kitikmeot region. **Arcadia Bay**, owned by Alix Resources Corp., comprises 1,280 ha, and had work last reported in 2008. The **Contwoyto**, **Hood River** and **Rockinghorse** IOL concessions were purchased in 2010 by Golden River Resources Corporation from Tahera Diamond Corporation. The properties had previously been explored by Golden River (formerly Bay Resources Ltd.) under an agreement signed with Tahera in 2002. No work has been reported on these properties since 2006. The **Needle Lake** gold project is owned by Kaminak Gold Corporation, and was optioned to TerraX Minerals Inc. until December 31, 2010 at which time TerraX declined further participation in the agreement. No work has been reported on the property since 2008.

No work was reported in 2011 from a number of projects located within the Hornby Bay Basin and the neighbouring Muskox intrusion. The **Muskox** Ni-Cu-PGE project overlying the Muskox intrusion is controlled by Prize Mining Corp. The project has remained inactive since Silvermet Inc. terminated its earn-in agreement in 2010. The **MIE** project owned by MIE Metals Corp. is focused on discovering Ni-Cu-PGE mineralization within the Muskox intrusion; work on the property was last reported in 2007. MIE Metals is also involved in the **Bear Valley** uranium project and the **HBME / MIE Metals Corporation Joint Venture**, operated jointly with Hornby Bay Mineral Exploration Ltd.; neither project has recently reported work. Triex Minerals Corporation (a 100 per cent-owned subsidiary of CanTerra Minerals Corporation) and Pitchstone Exploration Ltd. operate four uranium projects, **Dismal Lake**, **Dismal Lakes West**, **Kendall River** and **Mountain Lake**, overlying the Hornby Bay Basin, under a joint venture agreement. No work has been reported on these properties since 2008. The **Northern Hepburn** project straddles the Nunavut and NWT border, and is controlled by Uranium North Resources Corp. Diamonds North Resources Ltd. has a 50 per cent interest in five of the claims located on the Nunavut side of the border. No work has been reported recently from Northern Hepburn.

The **Bathurst Inlet** uranium project is located south of the community of the same name, and is controlled by Northrock Resources Inc. No work was reported on the property in 2011.

# KITIKMEOT REGION

## INACTIVE PROJECTS

Number	Project	Operator
<b>BASE METALS</b>		
 124, 126	Anialik, Canoe Lake	North Arrow Minerals Inc.
 125	Blue Caribou	Skybridge Development Corp.
 127	Musk	Xstrata Zinc Canada
 128	Silvertip	Strongbow Exploration Inc.
 129	Yava	Savant Explorations Ltd.
<b>DIAMONDS</b>		
 183	Darby	Teck Resources Limited
 184	Grail	Indicator Minerals Inc.
 185	Hepburn	Diamonds North Resources Ltd.
 186 – 188	Sakari, Siku, Ualliq	Diamonds North Resources Ltd.
 189	Victoria Island	Diamonds North Resources Ltd.
<b>GOLD</b>		
 243, 245	Anialik, Canoe Lake	North Arrow Minerals Inc.
 244	Arcadia Bay	Alix Resources Corp.
 246, 247, 249	Contwoyto, Hood River, Rockinghorse	Golden River Resources Corporation
 248	Needle Lake	Kaminak Gold Corporation
<b>LITHIUM</b>		
 309	Torp Lake	North Arrow Minerals Inc.
<b>NICKEL-COPPER-PLATINUM GROUP ELEMENTS</b>		
 338	MIE	MIE Metals Corp.
 339	Muskox	Prize Mining Corp.
<b>URANIUM</b>		
 391, 392	Bathurst Inlet (Upits, Pomy)	Northrock Resources Inc.
 393, 394, 397, 399	Dismal Lake, Dismal Lakes West (Sandy Creek), Kendall River, Mountain Lake	Triex Minerals Corporation
 395	HBME / MIE Metals Corporation Joint Venture	Hornby Bay Mineral Exploration Ltd.
 396	Northern Hepburn	Uranium North Resources Corp.
 398	Bear Valley	MIE Metals Corp.

Please refer to the map on page 19 for the location of inactive projects in the Kitikmeot region.

# KIVALLIQ REGION

## OVERVIEW

The Kivalliq region spans an area of 445,109 square kilometres (km<sup>2</sup>) and comprises the eastern half of the mainland portion of Nunavut, as well as Southampton and Coats Islands. The region's main communities are Rankin Inlet, Arviat and Baker Lake. As exploration has increased and mining operations, both production and development, have expanded, mineral exploration companies are regularly utilizing services locally in Rankin Inlet and Baker Lake. Many other communities in the region, including Arviat, Chesterfield Inlet, Coral Harbour, Repulse Bay, and Whale Cove, are also providing services to support exploration activities. This year the entire Kivalliq region experienced significant growth in mineral exploration activity, particularly in gold and uranium exploration.

Rocks of the Archean-Proterozoic Western Churchill and the Palaeozoic Hudson Bay Lowland geological provinces underlie much of the region. Known mineral deposits and occurrences include gold, uranium, mafic- to ultramafic-related magmatic nickel-copper-platinum group elements (Ni-Cu-PGE), diamondiferous kimberlites, and precious metal-bearing quartz-carbonate vein systems.

Agnico-Eagle Mines Limited's Meadowbank gold mine, located 85 km north of Baker Lake, employs 738 people on two-week rotations, with approximately 425 personnel on site at any one time; that employment at the site is almost 40 per cent. In 2010, Meadowbank's contribution

to the Nunavut economy was about 20 per cent. With the successful installment of a secondary crusher in June 2011, the mill exceeded its original design throughput of 8,500 tonnes per day to achieve a total throughput of 9,400 tonnes per day with the additional crushing capacity.

AEM's other Kivalliq-based gold project, Meliadine, was acquired from Comaplex Minerals Corp. in 2010 and is located 25 km north of Rankin Inlet. In 2011, the company implemented a \$65 million exploration program at Meliadine, including 95,000 metres (m) of drilling, camp improvements and underground bulk sampling.

The Proterozoic Thelon Basin, located near Baker Lake, is considered to have strong potential to host unconformity-type uranium deposits similar to those found in the Athabasca Basin. The most advanced uranium project within the Thelon Basin is AREVA's Kiggavik project. The company is expected to submit a draft Environmental Impact Statement for Kiggavik by the end of 2011.

The continuing increase in the price of gold has contributed to the re-activation of many properties with known gold occurrences, and to a corresponding increase in prospecting and exploration activities. Sixty-four prospecting permits issued in 2011 are located in the Kivalliq region, which is more than half of the total of 106 issued in Nunavut.

*Helicopter with approaching storm*  
Courtesy of Frank Morrison

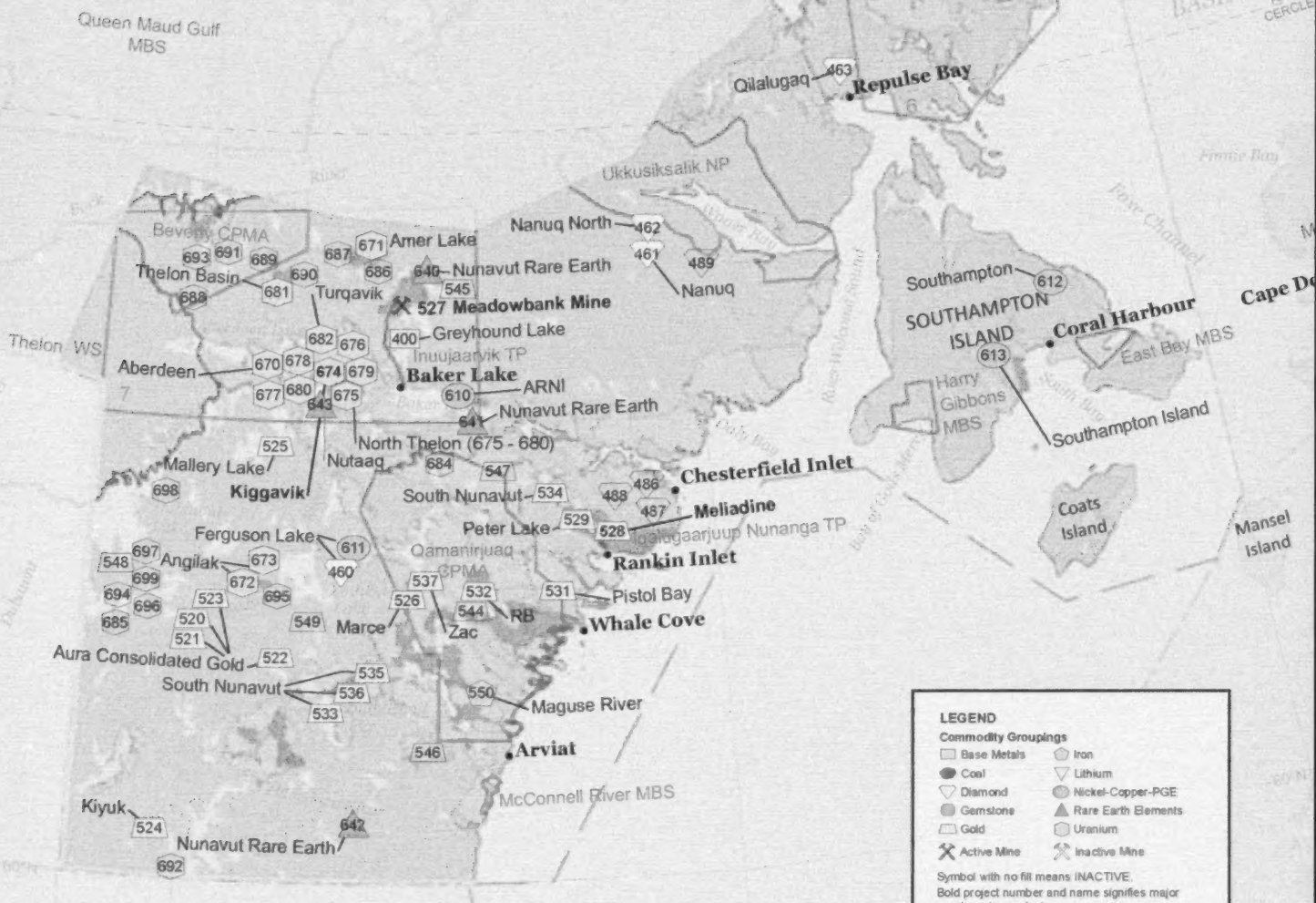




# Kivalliq Region

50 25 0 50 100  
Kilometres

Projection: Canada Lambert Conformal Conic, NAD 83



MANITOBA

## LEGEND

### Commodity Groupings

- Base Metals
- Coal
- Diamond
- Gemstone
- Gold
- Iron
- Lithium
- Nickel-Copper-PGE
- Rare Earth Elements
- Uranium
- Active Mine
- Inactive Mine

Symbol with no fill means INACTIVE.

Bold project number and name signifies major or advancing project.

### Areas with Surface and/or Subsurface Restrictions

- CPMA Caribou Protection Measures Apply
- MBS Migratory Bird Sanctuary
- NP National Park
- NWA National Wildlife Area
- TP Territorial Park
- WP Wildlife Preserve
- WS Wildlife Sanctuary

### Inuit Owned Lands (Fee simple title)

- Surface Only
- Surface and Subsurface

### Geological Mapping Programs

- Canada-Nunavut Geoscience Office (See master legend for details)

### Boundaries

- NLCA Nunavut Settlement Area
- Nunavut Regions
- NLCA Nunavik Settlement Area
- Provincial / Territorial

### Transportation Routes

- Meadowbank Road
- Mine Inlet Tote Road
- Yellowknife-Contwoyo Winter Road
- Proposed Bathurst Inlet Port and Road
- Proposed Steensby Inlet Rail Line

# KIVALLIQ REGION

## BASE METALS and DIAMONDS

### BASE METALS

400	GREYHOUND LAKE
Operator/Owner	Aura Silver Resources Inc.
Commodities	Copper, Lead, Zinc, Gold, Silver
NTS	56D/12, 56D/13, 66A/09
Location	40 km north of Baker Lake

The Greyhound Lake project comprises 57 mineral claims that straddle the all-weather access road from Baker Lake to the Meadowbank gold mine. The claims overlie Archean supracrustal rocks of the Woodburn Group. The property has been explored for several years and historical results highlight mineralization of base metals, gold and silver with values up to 8.2% Pb, 18.5% Zn, 9.2% Cu, 3,080 grams per tonne (g/t) Ag and 28 g/t Au in extensive carbonate iron formation. Mineralization at Greyhound is hosted by Archean volcanic-sedimentary sequences with interspersed banded iron formations. In places, the iron formation is conductive and sulphidized.

The first half of Aura's 2011 season at Greyhound consisted

Massive sulphide fragment caught up in quartz veining  
Courtesy of Aura Silver



of geophysical surveys and 2,055 m of diamond drilling. The targets for this drill program were selected based on results from an induced polarization survey completed in the 2010 field season, and from 40 line-km of resistivity and electromagnetic ground geophysical programs completed early in the 2011 field season. The company also conducted soil sampling, prospecting and mapping. A gas hydrocarbon survey of the soil samples defined one gold and two silver targets in areas that had not been previously drill-tested; these targets are candidates for drilling in 2012.

In the second half of the 2011 season, Aura ran a 2,200-metre (m) diamond drilling program to test several anomalies in the northeast portion of the property. Resulting new prospects are North Gossan, JohnPaul, Bandit, and Silver. Grab samples taken during prospecting returned significant results, including a bedrock sample of sulphide-bearing iron formation at the JohnPaul showing that assayed 6.49 g/t Au, and two samples from the Silver prospect that contain massive pyrrhotite and pyrite and assayed up to 39.60 g/t Ag. The company additionally staked ground over the Jackpot prospect, located southeast of the main Greyhound property. At Jackpot, surface samples returned a best result of 1.65 g/t Ag and 12.60 g/t Ag.

Aura also staked an additional 5,300 hectares (ha) to the north of the North Gossan gold prospect, and 20,848 ha on the Jackpot prospect, bringing the total area of the Greyhound project to 54,977 ha.

### DIAMONDS

460	FERGUSON LAKE
Operator, Partner	Thanda Resources Ltd., Starfield Resources Inc.
Commodity	Diamonds
NTS	65I/10 - 65I/16
Location	160 km south of Baker Lake

# KIVALLIQ REGION

## DIAMONDS

The Ferguson Lake project comprises 190 mineral claims and 10 mineral leases with a combined total area of approximately 194,500 ha, and is located east of Yathkyed Lake in the central Kivalliq region. The property is prospective for diamonds and for nickel-copper-platinum group elements (Ni-Cu-PGE).

Under the terms of the joint venture agreement with Starfield Resources Inc., Thanda Resources Ltd. could earn a 50 per cent interest in the diamond potential of the Ferguson Lake property by spending \$6.5 million over a three year period beginning in 2009. Exploration conducted in 2009 consisted of ground geophysics and drill testing of potential kimberlite targets. Seven kimberlite-style anomalies were tested with limited results. Thanda completed an airborne magnetic survey over the property in 2010 with the intention of identifying targets for follow-up in 2011. No results from this survey have been released. Neither Starfield nor Thanda explored the property for diamonds in 2011, and no information has been released concerning the status of the joint venture agreement.

461	NANUQ
Operator/Owner	Peregrine Diamonds Ltd.
Commodity	Diamonds
NTS	56G/01 - 56G/03, 56G/06 - 56G/11
Location	225 km north of Chesterfield Inlet

The Nanuq project, 100 per cent-owned by Peregrine Diamonds, covers 235,600 ha and lies approximately 225 km southeast of Repulse Bay. Past exploration identified three diamondiferous kimberlites of late Cretaceous age. The pipes lie within five kilometres of one another and include Naturalik and Kayuu, both approximately five hectares in size, and Tudlik which is about one hectare in size. Each pipe has unique textural phases of kimberlite material, as observed from drill core.

Drill set up at Nanuq project  
Courtesy of Peregrine Diamonds



A \$2.0 million exploration budget was announced for a drill program, ground geophysical surveys and sampling to explore the property for additional kimberlite. Ground-based magnetic and electromagnetic surveys were completed on several targets. On four priority targets with geophysical characteristics and promising kimberlite indicator mineral results, a total of 585 m of drilling was completed. No kimberlite was encountered in the drill core. A further 49 sediment samples were collected for kimberlite indicator mineral analyses. Data interpretation continues on results obtained at Nanuq and Peregrine expects to continue exploring the property.

462	NANUQ NORTH
Operator, Partners	Indicator Minerals Inc., Peregrine Diamonds Ltd., Hunter Exploration Group
Commodity	Diamonds
NTS	56H/02, 56H/03
Location	300 km northeast of Baker Lake

The Nanuq North project is a 50/50 funded partnership between Indicator Minerals and Peregrine Diamonds, with Indicator Minerals operating the 33,100 ha property. For



## KIVALLIQ REGION

### DIAMONDS and GOLD

16 claims covering 13,864 ha, 40 per cent is owned by Peregrine Diamonds, 40 per cent is owned by Indicator Minerals and 20 per cent is owned by Hunter Exploration. Indicator Minerals and Peregrine Diamonds each hold an undivided 50 per cent interest in the remaining 19,236 ha (35 claims).

The 1.8 ha NQN-001 kimberlite, discovered in 2008, was extensively drilled in 2010, with more than four tonnes of kimberlite recovered. Positive microdiamond results, from 1,008 kilogram (kg) of material, were previously reported. No additional information has been released.

During 2011, Peregrine operated the exploration program on Indicator Mineral's behalf. A \$250,000 field program included ground magnetometer surveys and 214 m of core-drilling into one target. No kimberlite was encountered. Results from 96 till samples collected in 2010 have not been reported and other geophysical targets and multiple identified kimberlite indicator mineral trains remain to be tested. Interpretation of results is ongoing and the partners expect to continue exploration at Nanuq North.

<div>463</div> <b>QILALUGAQ</b>	
Operator	Stornoway Diamond Corporation
Commodity	Diamonds
NTS	46K/05, 46K/12, 46L/09, 46L/10, 46L/15, 46L/16, 46M/01, 46M/02
Location	10 km north of Repulse Bay, extending across the Rae Isthmus

Stornoway Diamond Corporation increased its ownership of the 183,000 ha Qilalugaq property to 100 per cent in May of 2010, from its former joint venture partner in the project, BHP Billiton Diamonds Inc. The property lies approximately 10 km north of Repulse Bay and extends across the Rae Isthmus to Committee Bay.

A total of 19 kimberlite bodies have been identified following several years of exploration programs. The largest

is the Q1-4 kimberlite complex at 14 ha in size. Naujaat 9 is a kimberlite dike, discovered in 2010, which is about 650 m in length in discontinuous exposures.

There has been no additional activity or analyses of microdiamond recovery announced in 2011.

### GOLD

<div>520 521</div> <div>522 523</div> <b>AURA CONSOLIDATED GOLD</b> (AN, F13, NOWYAK, ROBIN)	
Operator/Owner	Uranium North Resources Corp.
Commodity	Gold
NTS	65G/15, 65G/16, 65J/02 - 65J/05
Location	275 km southwest of Baker Lake <sup>1</sup> , 305 km southwest of Baker Lake <sup>2</sup> , 245 km northwest of Arviat <sup>3</sup> , 295 km southwest of Baker Lake <sup>4</sup>

Uranium North Resources Corp. has 13 prospecting permits (236,873 ha) and two mineral claims (2,090 ha) covering four prospective areas: the AN, F13, Nowyak, and Robin prospects. Historical sampling has returned anomalous gold, silver and copper values from all four occurrences.

Gold and silver mineralization at Nowyak occurs in a sericite-carbonate-pyrite altered shear zone. The zone ranges from 40 to 80 m wide, and extends over a length of 20 km. At Robin, the mineralization is hosted in a 2.6 km-long structure, with grab samples from this zone assaying between 1.00 and 11.75 g/t Au. Two samples from the Robin prospect assayed at 1.9% and 2.2% Cu, and several samples assayed between 1.00 g/t and 16.20 g/t Ag. At the F13 prospect, gold, copper and silver mineralization occurs with iron carbonate altered rocks over an area of one square kilometre. Previous assays of chip and channel samples from F13 yielded values of 168 g/t Au, 54.51 g/t Ag and 21.4% Cu. Mineralization at the AN prospect occurs over a 5 km-long structure; limited exploration has been undertaken on this prospect.

In 2011, the company released soil geochemical results from the 2010 sampling on the Robin prospect; these results extended the anomaly an additional 200 m to the

## KIVALLIQ REGION

### GOLD

east of the main structure. Additional anomalous till results indicated a possible second mineralized zone to the west and north of the main Robin zone, and the prospect is now considered to be open to the north.

During the 2011 field season work was conducted on Nowyak, F13, and Robin. Prospecting and a geophysical survey were done on Nowyak, and detailed prospecting and geophysics were undertaken on F13 and Robin to plan future drill-targets. A drill program was planned at Nowyak, but was not able to be initiated. The company considers Nowyak and Robin as candidates for drilling in 2012.

524	KIYUK
Operator/Owner	Prosperity Goldfields Corp.
Commodity	Gold
NTS	65C/07 - 65C/10
Location	350 km south-southwest of Arviat

In late 2010, Evolving Gold Corp. transferred the claims belonging to the Kiyuk property to its 100 per cent-owned subsidiary, Prosperity Goldfields Corp. The purpose of the transfer was to allow the new company to focus solely on Kiyuk, which is Evolving Gold's only Canadian gold property.

Gold mineralization at Kiyuk occurs in a sequence of conglomerates and breccias along an unconformity between two thick sedimentary units: the underlying Hurwitz Supergroup and the overlying Kiyuk Group. In early 2011, Prosperity announced its spring 2011 drill program. This program included 3,500 m of diamond drilling on five targets: Gold Point, Rusty, Cobalt, North Snake Lake, and Heart Pond. The drilled targets at Gold Point, Rusty, and Cobalt show gold mineralization that includes disseminated, small grains of native gold, ranging from less than 0.1 millimetres (mm) to 0.5 mm in size, along with minor sulphide grains. Strong albite-magnetite and albite-actinolite-quartz-carbonate alteration accompanies the gold mineralization.

The first phase of drilling was completed in September 2011, and Prosperity released results for the Gold Point, Cobalt, and Rusty targets. The best results were obtained on the Rusty target with values of 157.6 m at 1.70 g/t Au, with two concentrated zones of 30.5 m at 4.90 g/t Au and 19.2 m at 6.17 g/t Au. At Gold Point, 63.6 m at 2.84 g/t Au was intersected, with two concentrated zones of 38.6 m at 4.15 g/t Au and 5.4 m at 11.64 g/t Au. The Cobalt target's best result returned 32.1 m at 1.82 g/t Au.

These results have allowed the company to plan for an extensive drill program beginning in February 2012.

525	MALLERY LAKE
Operator/Owner	Uranium North Resources Corp.
Commodity	Gold
NTS	650/09, 650/10, 650/15, 650/16
Location	132 km southwest of Baker Lake

The Mallery Lake property has three main gold-mineralized zones identified on surface: the North Central, Eastern and Western zones. The property's geology consists of Proterozoic rhyolitic sequences that have been extensively cross-cut by quartz veins up to 20 m in thickness. Grab samples taken from two historical gold showings within the main Mallery Lake stockwork zone returned grades of 24.56 g/t Au and 110 g/t Ag.

After acquiring Mallery Lake in 2010, the company ran a prospecting and geochemical till sampling program and collected 53 rock-chip samples, 210 till samples, and 23 heavy mineral samples. Results indicated that the prospect was significantly larger than had been previously thought. As a result, plans for 2011 included additional staking, a more detailed sampling program and up to 2,000 m of drilling.

The company staked new claims bringing the total size of the Mallery Lake property to 19,350 ha. The claims cover

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## GOLD

an area where anomalous gold results were returned from till samples; these results include the discovery of angular gold grains. At the end of the 2011 season, 750 m of core was drilled from five drill holes, focusing on mineralized outcrops that occur over an 800 square-metre area. No results from this program have been released.

526	532	537	MARCE <sup>1</sup> , RB <sup>2</sup> , ZAC <sup>3</sup>
Operator/Owner	Anconia Resources Corp.		
Commodity	Gold		
NTS	55L/07, 55L/10 <sup>1</sup> , 55L/11, 55L/12 <sup>2</sup> , 55L/12 <sup>3</sup>		
Location	175 km west-northwest of Whale Cove <sup>1</sup> , 110 km northwest of Whale Cove <sup>2</sup> , 160 km west-northwest of Whale Cove <sup>3</sup>		

Anconia Resources' Marce, RB, and Zac properties northwest of Whale Cove cover three separate claim blocks totaling 9,060 ha. Exploration began on the properties with three reconnaissance-level site visits in July 2011, and included sampling to confirm historic showings and prospecting for new occurrences. Additional samples were taken on the RB claims to sample for base metals in addition to gold. The site visits also allowed for the planning of a more thorough program in the fall, which was to include mapping, trenching, and sampling on all three sites.

An airborne magnetic survey was subsequently performed on all three prospects. Results from the survey led Anconia to stake the ground between the ZAC and Marce claims and to conduct further exploration on Marce.

*Haul truck ascending from Meadowbank pit with load of ore*  
Courtesy of AEM/DC



Field programs for 2012 are contingent on results from 2011 activities.

527	MEADOWBANK MINE
Operator/Owner	Agnico-Eagle Mines Limited
Commodity	Gold
NTS	56D/13, 56E/04, 66A/16, 66H/01, 66H/02
Location	75 km north of Baker Lake

Agnico-Eagle Mines Limited (AEM) achieved commercial production from the Meadowbank gold mine in 2010. The first gold bar was poured in February 2010 and the mine officially opened in June 2010. Full year 2010 production was 265,659 ounces of gold with total cash costs of \$693 per ounce.

Meadowbank is currently Nunavut's only operating mine, and employs 738 people of which almost 40 per cent are Inuit. In its first year of production, Meadowbank contributed 20 per cent to the Nunavut economy. Operations at the mine support a variety of secondary businesses in Baker Lake and elsewhere within Nunavut.

The Meadowbank property hosts the Goose Island, Portage and Vault deposits, which together make up the Meadowbank mine plan. An additional deposit, the PDF, is undergoing a full assessment by the company. Mining at Meadowbank is an open-pit operation with current mining operations restricted to the Portage pit. Portage is anticipated to produce ore until 2014. Construction of the Bay-Goose Dike is underway.

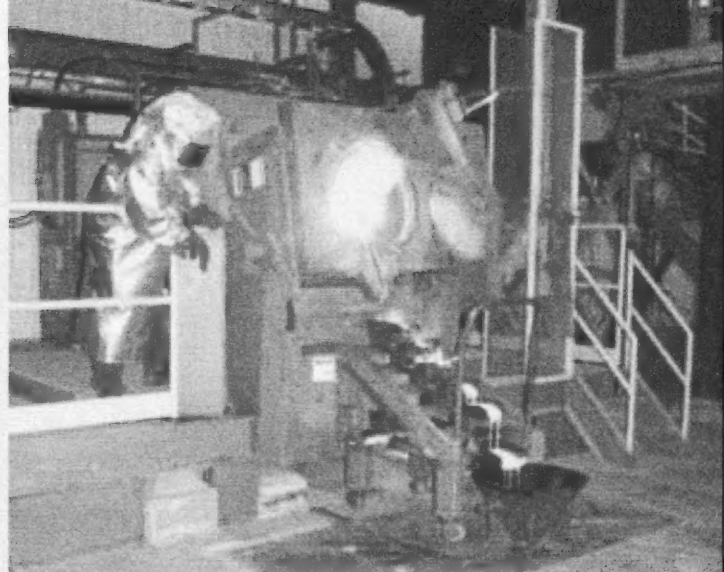
Following the 2013 completion of this dike, the Goose Island pit is expected to produce ore from 2013 to 2015. Mine development at Vault is expected to commence in 2015.

The installation of a permanent secondary crusher at the Meadowbank mill in June 2011 allowed the company to





*Portage pit, Meadowbank site  
Courtesy of AANDC*



*Gold pour, Meadowbank Mine  
Courtesy of AANDC*

process a record amount of gold averaging 9,414 tonnes of ore per day. Production at Meadowbank slowed in March after a fire destroyed the site's kitchen and dining facilities, but AEM was able to resume full-strength operations quickly and subsequently exceeded its second-quarter production targets. The new facilities arrived at the site in August and were expected to be in full operation by December. As of September 30, 2011, 277,395 ounces of gold had been produced this year. These year-to-date gold production rates suggest that the company's estimate of 310,000 ounces for 2011 will be surpassed.

The geology of the Meadowbank mine comprises Archean-aged volcanic and sedimentary rocks of the Woodburn Lake Group. The Goose Island and Portage deposits are hosted by a magnetite-rich iron formation, whereas intermediate volcanic rocks host most of the mineralization at the Vault deposit. All the host rocks and associated gold deposits are tightly folded, structurally complex and situated between regional-scale granitic plutons. Gold is associated with quartz flooding and pyrite and/or pyrrhotite mineralization that have been traced along two regional structural trends: the Meadowbank Trend and the Pipedream Lake Trend. The Meadowbank Trend hosts the Goose Island, Portage and Vault deposits, and the Pipedream Lake Trend hosts the PDF deposit.

The Portage gold deposit is 2 km in length and strikes north-northwest; the deposit consists of a regional fold with both limbs extending to the west. Mineralization in the lower limb of the fold is typically 6 to 8 m thick but can be up to 20 m thick within the hinge zone. Goose Island, located 500 m to the south of Portage, is geologically similar to the Portage deposit. The Goose Island deposit is 10 to 12 m thick, is 750 m in length along a north-

northwest strike, is steeply dipping to the west, and can be traced below surface to a depth of 500 m. The Vault deposit, located 3 km northeast of the Portage pit, is a flat-lying and shallowly-dipping body. This deposit has a defined strike-length of 1.1 km and the mineralized area has been disturbed by two sets of faults. The main gold-bearing zone is 8 to 12 m thick and the hanging wall lenses are 3 to 5 m thick.

Exploration for new targets continued along the Meadowbank Trend in 2011; areas north and south of the Portage and future Goose and Vault open pits were evaluated. Drilling with the purpose of converting resources to reserves took place along the southern margins of the Goose Island deposit and the south and east extensions of the Vault deposit. Exploration drilling was completed on the Tern Lake and Far West Iron Formation, and Gosling prospects. Staking resulting from exploration on the property since acquisition has increased Meadowbank's tenure from 38,700 ha to 76,900 ha as of the summer of 2011.

Current proven and probable reserve estimates at Meadowbank are 34.10 million tonnes at 3.18 g/t Au for a total of 3.47 million ounces. Current indicated and inferred resource estimates are of 33.70 million tonnes with grades between 1.7 and 2.00 g/t Au for a total of 2.10 million ounces. AEM's long-term goals for Meadowbank include being able to add another 2.00 million ounces to the reserve estimates over the next five years.

Future work at Meadowbank will focus on improving grade control and decreasing dilution, and improving equipment durability to better work in the Arctic environment.

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## GOLD

528	MELIADINE
Operator/Owner	Agnico-Eagle Mines Limited
Commodity	Gold
NTS	55J/13, 55J/14, 55K/16, 55N/01, 55N/02
Location	20 km north of Rankin Inlet

Agnico-Eagle Mines Limited (AEM)'s Meliadine project covers 56,092 ha and is located 20 km north of Rankin Inlet. The mineral tenure of the property is comprised of Crown mineral claims (50,334 ha), Crown mineral leases (931 ha), and Nunavut Tunngavik Incorporated Inuit Owned Lands Exploration Agreements (4,827 ha).

The Meliadine property was acquired by AEM from Comaplex Minerals Corp. in July 2010; AEM also acquired all of Comaplex's remaining Nunavut assets. The deposits of the Meliadine project are estimated to have an indicated resource of 1.50 million ounces of gold (8.80 million tonnes grading 5.20 g/t Au) and an inferred resource of 2.6 million ounces of gold (11.80 million tonnes grading 6.90 g/t Au). In addition, the project has 2.64 million ounces of gold in probable reserves. These resources are hosted in several deposits: Tiriganiaq, F Zone, Discovery, Pump, Wolf, and Wesmeg. Continued exploration work has increased the prospective resources and project size by 34 per cent since the property was purchased.

*Geologist pointing out features of rock underground, Meliadine site*  
*Courtesy of Agnico-Eagle Mines Limited*

The Meliadine exploration program in 2011 had a budget of \$65 million and included extensive drilling. At the peak of the program, 10 drills were operating and recovered 105,000 m of core. Much of this drilling occurred on the Wesmeg deposit, although a mini-bulk sample (236 m of core) was drilled from the underground development excavations. In addition to the exploration work, the camp facilities were expanded and a new tank farm was constructed.

The geology of the high-grade Tiriganiaq deposit comprises a series of sub-parallel gold zones. Infill drilling at Tiriganiaq returned near-surface high-grade results from outside the current known resources; this includes 24.90 g/t Au over 7.8 m and 7.90 g/t Au over 20.4 m. High-grade gold mineralization was also traced to depth as one drill hole intersected 7.00 g/t Au over 17 m at 570 m below surface.

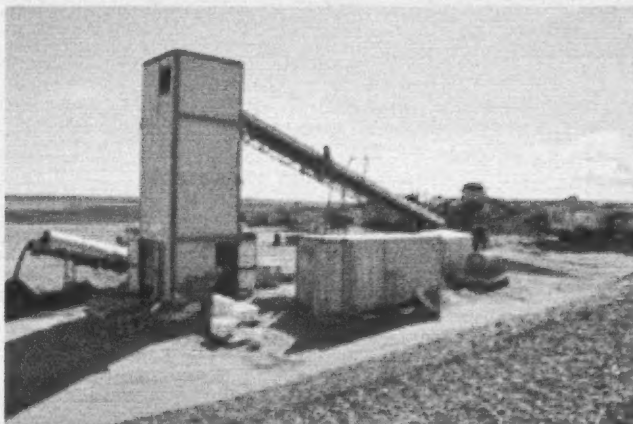
Away from the Tiriganiaq deposit, initial drilling results from the F Zone deposit suggest the resources at Meliadine may be expanded further. Drill holes have intersected significant mineralization both near-surface and at depth; results include intercepts of 6.62 g/t Au over 11.4 m, 6.32 g/t Au over 8.2 m and 4.20 g/t Au over 11.0 m. Drilling at Wesmeg also returned promising results. Two drill holes from the F Zone's North Trend intersected 5.89 g/t Au over 3.9 m at a vertical depth of 70 m and a 6.7 m intercept grading 3.07 g/t Au at about 100 m below surface. The South Trend's best result returned 8.17 g/t Au over 5.4 m.

AEM considers the entire Meliadine property to have the potential to host significant additional gold resources. Plans for the 2012 season include drilling a total of 110,000 m of core using 12 drills and expanding the office space.



# KIVALLIQ REGION

## GOLD



Sampling tower, Meliadine project  
Image of Agnico-Eagle Mines Limited

An extension of the ramp for deeper underground access has been postponed until 2013 pending permitting and approval of future development. AEM's application for a 25-km all-weather-access road from Rankin Inlet to the main Meliadine property is currently in the regulatory process. If this application and other necessary permits are finalized, AEM's current anticipated timeline could see construction on the mine in 2014-2015 and gold production beginning in 2016.

529 PETER LAKE	
Operator/Owner	Canada Nickel Corp.
Commodity	Gold
NTS	55N/01, 55N/02
Location	40 km northwest of Rankin Inlet

The Peter Lake project is located on Inuit Owned Land parcel R112-001. Preliminary work on the property occurred in 2009 and 2010 to provide targets for the 2011 program. The 2011 field season was planned to include 1,500 m of diamond drilling in eight to 12 holes, prospecting, geological mapping, and geophysical surveying.

No results from this work have been released.

531 PISTOL BAY	
Operator/Owner	Northquest Ltd.
Commodity	Gold
NTS	55K/06, 55K/10, 55K/11
Location	50 km northwest of Whale Cove

In late 2010, Northquest Ltd. optioned from a private source three mineral claims which make up the core of the Pistol Bay project. The company subsequently staked additional claims and was granted five prospecting permits to increase the size of the property to approximately 1,100 km<sup>2</sup>.

The Pistol Bay project area is underlain by rocks of the Rankin-Ennadai greenstone belt. A number of gold occurrences are known on the property, including the Pistol Porphyry, Cooley, Sako and Beretta occurrences. Gold occurrences have been identified associated with quartz veins at or near fold closures in banded iron formation and also associated with altered porphyritic intrusions. The property is interpreted to be in a similar structural and stratigraphic setting as the Meliadine gold deposit located 80 km north of Pistol Bay.

In 2011, Northquest completed 3,800 line-km of airborne magnetometer surveys over the property as initial work to prepare for surface exploration, which included ground magnetometer surveys, mapping and sampling. This work was used to select drilling targets at the Pistol Porphyry, Cooley and Sako occurrences. A new discovery, the Bazooka occurrence, was identified from the 2011 work. Grab and channel samples from Pistol Porphyry, Cooley, Sako and Bazooka occurrences returned results of up to 4.33 g/t Au, 1.51 g/t Au, 5.07 g/t Au and 8.07 g/t Au, respectively.

The company completed 2,515 m of diamond drilling in 17 holes divided among the Pistol Porphyry (six drill holes: 1,053 m), Cooley (seven drill holes: 829 m) and Sako (four drill holes: 633 m) occurrences. No results have been released.



# KIVALLIQ REGION

## GOLD and IRON

Reconnaissance surface sampling was also completed at the Hourglass Lake occurrence, located 70 km southwest of the Pistol Bay property. The occurrence was discovered by INCO geologists in the 1980s, who defined a 500 m-long, 1.5 m-wide zone of northeast-trending, gold-bearing quartz vein stockwork now referred to as Zone 1. Northquest collected 33 samples from Zone 1 and from several other mineralized outcrops in the area in 2011. Highlights from Zone 1 include results of 63.20 g/t Au/0.5 m from a chip sample and 54.60 g/t Au from a grab sample.

<div> <div>533</div> <div>534</div> <div>535</div> <div>536</div> </div>		<b>SOUTH NUNAVUT</b> (ESKER <sup>1</sup> , FOX <sup>2</sup> , RIVER <sup>3</sup> , YANDLE <sup>4</sup> )	
Operator/Owner		Diamonds North Resources Inc.	
Commodity		Gold	
NTS		55N/06, 55N/07 <sup>1</sup> ; 65H/10 <sup>1</sup> ; 65H/11 <sup>1</sup> ; 65H/15 <sup>1</sup>	
Location		180 km northwest of Arviat <sup>1</sup> , 80 km northwest of Rankin Inlet <sup>2</sup> , 155 km northwest of Arviat <sup>3</sup> , 160 km northwest of Arviat <sup>4</sup>	

In 2010 and 2011, Diamonds North acquired a number of gold properties based on gold values returned from historical exploration in the southern portion of the Kivalliq region. Among the properties are Esker, Fox, River, Yandle, and other regional targets.

Esker comprises a single claim located on the eastern shore of Henik Lake. The property includes a 1,300 m by 600 m area which contains more than 5 km of folded gabbro units hosting gold-mineralized veins. Drilling conducted by a previous operator intersected grades of up to 8.18 g/t Au over 13.27 m and substantial mineralized widths up to 70.95 m grading an average of 2.35 g/t Au. Diamonds North's plans for the property include re-logging the historic core and mapping the property.

The Fox property comprises four prospecting permits and is located 80 km northeast of Rankin Inlet. Historic exploration at Fox focused on iron formation-hosted gold, but Diamonds North considers that there is also potential for other favourable mineralized host rocks on the property. The rock units being examined have an estimated strike-length of 45 km. The entire sequence of rocks is intersected

by the Pyke Fault; this fault is thought to be related to the gold mineralization at Agnico-Eagle's Meliadine gold deposit 65 km south of Fox. Grab samples of up to 43.90 g/t Au have been returned from the Fox property. In 2011, reconnaissance prospecting was carried out over Fox, targeting both banded iron formation-hosted gold showings and other gold occurrences.

The River and Yandle prospects are both located within the Kaminak greenstone belt. River includes three historic showings of iron formation-hosted and sedimentary-hosted gold mineralization from which grab samples returned up to 84.00 g/t Au. Yandle covers five gold-mineralized zones; mineralization is associated with quartz-pyrite veins within gabbro formations. Historic drilling results from the property have reported up to 11.20 g/t Au over 3 m and grab samples have returned assays of up to 55.41 g/t Au. Reconnaissance prospecting was carried out on both properties.

The 2011 exploration program was carried out from Henik Lake, which is proximal to most of the properties being explored. No results from the program have been reported.

## IRON

<div> <div>550</div> </div>		<b>MAGUSE RIVER</b>	
Operator/Owner		IronOne Inc.	
Commodity		Iron	
NTS		55E/09 - 55E/11, 55F/12, 55F/13	
Location		60 km north of Arviat	

The Maguse River iron project comprises 11 prospecting permits, with a total combined area of approximately 184,600 ha. The project area overlies an approximate 200-km strike-length of folded, magnetite-rich, metasedimentary rocks of the Archean-aged Rankin-Ennadai greenstone belt. IronOne Inc. is exploring for Algoma-type iron deposits on

## KIVALLIQ REGION

### IRON and NICKEL/COPPER/PLATINUM GROUP ELEMENTS (PGE)

the property and projected a budget of \$4.3 million for the 2011 exploration program

Work on the property included an 8,044 line-km high resolution airborne magnetometer survey to identify prospective targets for exploration. Magnetic anomalies identified and outlined an 18 km strike-length of prospective stratigraphy. Two diamond drills completed 6,000 m in 20 drill holes on this target area. Reconnaissance mapping and sampling was also conducted on other priority targets identified by the airborne survey.

No results have yet been released.

### NICKEL/COPPER/PLATINUM GROUP ELEMENTS (PGE)

610	ARNI
Operator/Owner	Anconia Resources Corp.
Commodities	Nickel, Copper, Platinum, Palladium
NTS	56D/02, 56D/07
Location	55 km west of Baker Lake

The 2417-ha ARNI property, located 55 km west of Baker Lake, was acquired by Anconia Resources along with its Marce, RB, and Zac properties in 2011. Reconnaissance prospecting for base and platinum-group metals took place on the property in July 2011. No further work is planned at ARNI.

*Drill core from Ferguson Lake  
Courtesy of AARNIC*



611	FERGUSON LAKE
Operator/Owner	Starfield Resources Inc.
Commodities	Nickel, Copper, Platinum, Palladium
NTS	65I/10 - 65I/16
Location	160 km south of Baker Lake

The Ferguson Lake project is located within the northwestern part of the Herne Domain, a part of the Churchill Province. The property overlies the north end of the Archean Yathkyed greenstone belt. Massive sulphide nickel-cobalt-copper-platinum-palladium mineralization is hosted by fine- to coarse-grained gabbros and hornblendites. The main Ferguson Lake deposit is divided into East, Centre and West zones which are all spatially related to the same gabbro unit.

The 2011 drill program had several goals: to test a gossanous iron formation having a coincident airborne conductivity anomaly; to further evaluate a lens of massive sulphide mineralization located in the western half of the West Zone that is not included in the current resource estimates; and to further evaluate at depth the known massive sulphide mineralization comprising the 119 Zone Extension to the west of the West Zone. To accomplish these objectives, one diamond drill hole was completed at each of the three targets, for a total of 1,866 m.

One drill hole was completed into the western part of the West Zone, and intersected three closely-spaced massive sulphide lenses. Results from this drilling include 1.07% Cu, 0.91% Ni, 0.14 g/t Pt and 1.93 g/t Pd over 2.95 m; 1.97% Cu, 0.66% Ni, 0.40 g/t Pt and 1.77 g/t Pd over 7.5 m; and 0.6% Cu, 0.13 g/t Pt and 0.40 g/t Pd over 6.0 m.

The second hole was drilled to evaluate a strong east-northeasterly-trending and steeply northerly-dipping gossanous zone within a broad airborne conductivity anomaly. This drill hole intersected anomalous copper values of up to 631 parts per million over 3.91 m from a bleached, silicified zone containing disseminated pyrite and

## KIVALLIQ REGION

### NICKEL/COPPER/PLATINUM GROUP ELEMENTS (PGE) and RARE EARTH ELEMENTS

pyrrhotite. Minor pyrite and chalcopyrite were intersected at depth.

The third hole was drilled in the deep massive sulphide mineralization found within the 119 Zone Extension. The drill hole was completed to a depth of 1,229 m, and intersected five lenses of sub-massive to massive sulphide mineralization at the bottom. Four of these zones are considered significant, and include results of 1.19% Cu, 0.58% Ni, and 1.28 g/t Pd over 2.03 m; 1.23% Cu, 0.64% Ni, 0.32 g/t Pt and 1.73 g/t Pd over 5.65 m; 1.33% Cu, 0.73% Ni, 0.11 g/t Pt and 1.86 g/t Pd over 5.96 m; and 0.68% Cu, 0.26% Ni, 0.47 g/t Pt and 4.93 g/t Pd over 0.63 m.

In addition to the drill program, Starfield Resources initiated work to update the 2008 scoping study on the Ferguson Lake project. The company has also continued its testing of a hydrometallurgical process designed to recover base metals and high-grade iron oxide from massive sulphide ore. Based on positive preliminary test results from this process, Starfield plans to set up a mini-pilot plant in 2012 to further test and refine the process using Ferguson Lake ore.

612	SOUTHAMPTON
Operator/Owner	Vale Canada Limited
Commodities	Nickel, Copper, Platinum, Palladium
NTS	46B/10, 46B/15
Location	55 km north of Coral Harbour

Vale Canada Limited acquired the three prospecting permits that make up the Southampton project in 2009. The company acquired these permits based on work completed by the federal Southampton Island Integrated Geoscience project on ground determined to be prospective for Ni-Cu-PGE. Initial work in 2010 led to the planning of a program for the three-week 2011 field program. Geophysical surveying was followed up with a helicopter-supported field

program to investigate areas highlighted by the survey. No results from the program have been released.

613	SOUTHAMPTON ISLAND
Operator/Owner	Anglo American Exploration (Canada) Ltd.
Commodities	Nickel, Copper, Platinum, Palladium
NTS	46B/04, 46B/11 - 46B/14, 46C/01, 46F/01, 46G/03, 46G/04
Location	85 km north-northwest and 55 km west of Coral Harbour

The Southampton Island property is an early-stage exploration project of Anglo American Exploration (Canada) Ltd., a member of the Anglo American plc Group. The property consists of 26 mineral claims that cover an area of approximately 27,180 ha. Geochemical analyses were conducted on rock and till samples collected in 2010 over anomalies identified from an airborne geophysical survey in 2009. No results or further work have been reported although the mineral tenure has been retained.

## ▲ RARE EARTH ELEMENTS

640	641	642	NUNAVUT RARE EARTH (PP 8183 TO 8185; PP 8186 & 8187; PP 8188)
Operator/Owner	Cache Exploration Inc.		
Commodity	Rare Earth Elements		
NTS	56D/01, 56D/02; 56E/05, 56E/06; 65A/10		
Location	70 km east of Baker Lake <sup>1</sup> , 115 km north of Baker Lake <sup>2</sup> , 160 km southwest of Arviat <sup>3</sup>		

Cache Exploration Inc.'s Nunavut Rare Earth project consists of 20 claims and six prospecting permits, covering




## KIVALLIQ REGION

### RARE EARTH ELEMENTS and URANIUM

105,376 ha in southeastern Nunavut, that show evidence of rare earth element (REE) anomalies associated with known uranium occurrences.

Cache conducted a field program to determine the REE potential of each permit. Prospecting occurred using a RS-125 portable spectrometer and a total of 38 samples were taken from Permits 8183, 8184, and 8185. Among the locations sampled was a uranium-copper occurrence originally identified by the Geological Survey of Canada that returned more than 10,000 counts per second. On Permits 8186 and 8187, a total of 32 rock samples were collected, and uranium and potential REE mineralization was found in an unconformity between Archean granite and metasedimentary units. At this contact, the strongest radiometric anomaly returned values of up to 31,000 counts per second. Historical reports of occurrences with up to 10,000 counts per second have been documented for Permit 8188; however, these anomalous values were not re-confirmed. Ten rock samples were taken from across the property.

 <b>NUTAAQ</b>	
Operator/Owner	Forum Uranium Corp.
Commodity	Rare Earth Elements
NTS	66A/06
Location	65 km west of Baker Lake

In addition to the sampling on the prospecting permits, the company staked 20 claims in the area west of Nueltin Lake. No assay results have been reported to date.



Forum Uranium Corp. began uranium exploration at its 100 per cent-owned Nutaaq property located west of Baker Lake in 2007. A REE anomaly was discovered after work examining internal company geochemical databases and analyzing samples taken during 2009. The samples returned grades of 0.1% to 3.8% total rare earth oxides.

Based on these results, the focus at Nutaaq was changed from uranium to REEs, and the prospect, although on the North Thelon uranium project's claim block, is now treated as a separate project.

The local geology of Nutaaq comprises a structurally-bound 10 km by 8 km syenite body that was intruded by Hudsonian-aged granites and pegmatites. The REEs are hosted in goyazite, a strontium-rich hydrous clay mineral, within the syenite units; the mineralization may be related to alteration or metamorphic regression processes.

During 2010, two prospective zones were discovered in work conducted across this property to localize and understand the REE-bearing rocks. Samples taken across these two zones returned background values. Forum's 2011 program included systematic grid sampling over each mineralized zone using a portable x-ray fluorescence machine. The results from the x-ray fluorescence machine were used to determine follow-up sampling and drill-targets. Small-diameter diamond drilling occurred on targets that returned high total rare earth oxides values. The samples were submitted to the Saskatchewan Research Council for analyses and results are pending.

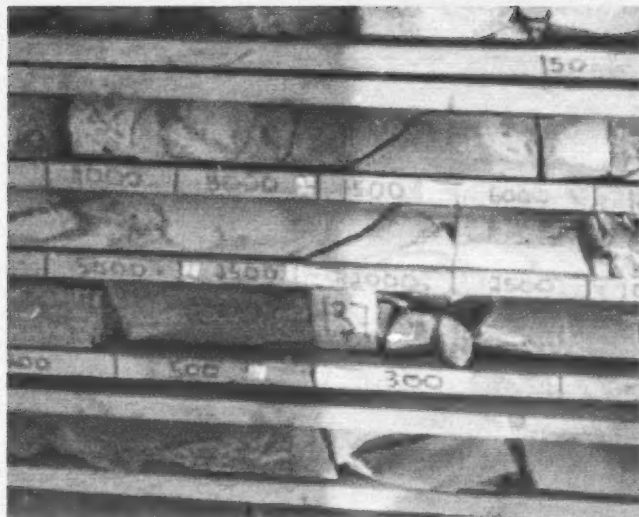
### URANIUM

  <b>ABERDEEN<sup>1</sup>, TURQAVIK<sup>2</sup></b>	
Operator/Owner	Cameco Corporation
Commodity	Uranium
NTS	66A/05, 66A/12, 66B/08, 66B/09, 66B/13 – 66B/16, 66G/03 <sup>1</sup> ; 66B/01, 66B/02, 66B/07 – 66B/10 <sup>2</sup>
Location	115 km west of Baker Lake <sup>1</sup> ; 105 km west-northwest of Baker Lake <sup>2</sup>

Cameco's 100 per cent-owned Turqavik and Aberdeen projects are located west of Baker Lake, along the eastern margin of the Paleoproterozoic-aged Thelon Basin. Work done on the property during the 2011 exploration program included ground geophysics, limited geological mapping and sampling, and diamond drilling. A total of 12,700 m in 47 drill holes was completed on both projects in a

## KIVALLIQ REGION

### URANIUM



Uranium core from Cameco Corporation's discoveries at Aberdeen and Qavvik sites  
Courtesy of AAFCO

combination of reconnaissance and delineation drilling. The delineation drilling was focused on the Tatiggaq and Qavvik prospects.

Uranium mineralization at Tatiggaq consists of veins and fracture-hosted ore zones, as well as foliation controlled disseminated to massive pitchblende along distinct oxidation-reduction boundaries. Eleven drill holes extended the mineralization to 80 m down-dip and 100 m along strike. The best intercepts from 2011 are 1.06%  $U_3O_8$  over 11.2 m, and 0.72%  $U_3O_8$  over 12.4 m; these results are based on radiometric probe equivalents as assays are still pending. Mineralization was also intersected 180 m west of the main zone. The main anomaly in the Tatiggaq area was tested with eight additional reconnaissance drill holes, and intersected strong alteration and prospective structure but no elevated radiometric counts.

At Qavvik, Cameco drilled 10 drill holes to test the main anomaly for additional mineralization. Overall, the Qavvik area is strongly altered with extensive low-grade mineralization and interspersed metre-scale high-grade intercepts. The mineralization is concentrated in irregular hydrothermal redox-front zones that preferentially follow the flat-flying foliation of the Woodburn Lake Group stratigraphy. Structurally-controlled mineralization in veins and fractures is also observed locally in some drill holes that intersect less pervasively altered rock. Mineralization was intersected in eight of the 10 drill holes with equivalent grade thicknesses between one and nine metre-per cent. Mineralized zones

have a defined strike-length of 135 m and a width of up to 130 m. One drill hole was collared into rock with anomalous radioactivity; mineralization was intersected close to surface at less than 5 m depth. This drill hole featured the best 2011 intercept with 0.22%  $U_3O_8$  over 18.4 m, including 0.74%  $U_3O_8$  over 1.6 m. This preliminary work suggests that there are two distinct lenses, one extending from the surface to 100 m in depth, and the other extending from 225 m to 325 m in depth.

Reconnaissance drilling was conducted on the Gerhard Extension, Loki, Hound, Arya, and Ghost grids. A total of 26 holes were drilled; based on results of strong prospective alteration signatures and elevated radiometric counts, Cameco will conduct follow-up work on the majority of these areas in 2012. As well, Cameco is working on permits that will allow the company to establish a new camp location proximal to the two new discoveries.

671	AMER LAKE
Operator/Owner	Uranium North Resources Corp.
Commodity	Uranium
NTS	66H/09, 66H/10
Location	40 km north of Baker Lake

The Amer Lake project is 100 per cent-owned by Uranium North Resources Corp. The project was inactive during the 2010 field season, as Uranium North focussed on its gold exploration projects, but was reactivated for the 2011 season. The Amer Lake deposit contains an inferred resource of 19.30 million pounds (lbs)  $U_3O_8$  at an average grade of 0.04%  $U_3O_8$ .

Drilling on the northwest part of the Amer Lake property initially was planned to include approximately 20 reverse circulation (RC) drill holes. Holes were targeted based on the results from a 2008 drill hole that returned the highest grade results. However, only 15 RC holes were drilled and three of the holes did not hit their target depth due to drilling difficulties. Cuttings from the drill holes were sampled and submitted for geochemical analyses. Initial results from the program showed elevated scintillometer counts in all of the holes drilled to the north and west of the original high-grade drill hole of 2008. Uranium North has

# KIVALLIQ REGION

## URANIUM



Geologist examines outcrop, Lac Cinquante property  
Courtesy of AANDC

interpreted these results to indicate that the mineralized zone extends to the southeast and beyond the boundary of the defined resource.

Plans for work on the property in 2012 have not been announced, nor have assay results been released.

672	673	ANGILAK (LAC CINQUANTE, YATHKYED)
Operator/Owner		Kivalliq Energy Corporation, Nunavut Tunngavik Incorporated
Commodity		Uranium
NTS		65J/06, 65J/09 – 65J/11
Location		235 km southwest of Baker Lake

The Angilak project comprises Crown mineral claims surrounding an Inuit Owned Land subsurface parcel. The main exploration focus of the project is the Lac Cinquante deposit, a basement-hosted, unconformity-associated hydrothermal vein-type uranium deposit.

Early in 2011, Kivalliq Energy announced its first National Instrument 43-101 (NI 43-101) compliant resource estimate from Lac Cinquante. Using a cut-off grade of 0.2%  $U_3O_8$ , an inferred resource of 810,000 tonnes grading 0.79%  $U_3O_8$  was determined for a total of 14.15 million lbs of uranium. The deposit also contains accessory metals with an estimated 319,000 ounces of silver, 4.05 million lbs of molybdenum and 1.98 million lbs of copper that could additionally be extracted.

A budget of \$17 million was allotted to the project in 2011. The work completed included 23,849 m of diamond drilling, 6,411 m of RC drilling, airborne and ground geophysical surveys, prospecting, mapping and soil geochemical surveys.

Drilling at Lac Cinquante's Main Zone was intended to delineate high-grade ore shoots along the margins of the deposit and to expand the resource. Results include 1.19%  $U_3O_8$ , 3.39% Cu, 0.56% Mo, and 46.50 g/t Ag over 1.3 m from one drill hole, and 5.69%  $U_3O_8$  over 0.2 m from another drill hole.

Two extensions of the deposit were discovered during 2011: the Eastern Extension and the Western Extension, located 400 m and 450 m, respectively, along strike to the east of the main deposit. Both extensions have a strike-length of 550 m. Highlights of the drilling on the Eastern Extension include 2.65%  $U_3O_8$ , 134.63 g/t Ag, 0.06% Cu, and 1.67% Mo over 0.5 m, and 2.33%  $U_3O_8$ , 61.40 g/t Ag, 0.16% Cu, and 0.57% Mo over 0.4 m from another hole. Mineralization at the Western Extension has been intersected at vertical depths of up to 327 m, the deepest known intersection on the property. Results from this deep zone include 2.02%  $U_3O_8$ , 26.90 g/t Ag, and 0.65% Cu over 2.0 m and 1.89%  $U_3O_8$ , 19.50 g/t Ag, and 0.35% Cu over 1.7 m.

Nineteen diamond drill holes were completed on the Blaze target discovered in 2010 and located 2 km west of Lac Cinquante. Mineralization at this target occurs as pitchblende in quartz-carbonate veins and breccia, and is divided into upper and lower zones. Blaze has been defined over a strike-length of 100 m, and mineralization has been intersected at vertical depths up to 126 m below surface. Drilling results include favourable intercepts from the upper zone where one drill hole intersected 1.01%  $U_3O_8$ , 83.00 g/t Ag, 1.48% Cu, and 0.28% Mo over 25.4 m, and another drill hole returned values of 0.63%  $U_3O_8$ , 74.30 g/t Ag, 1.31% Cu, and 0.35% Mo over 5.6 m.

The RC drill was used as a reconnaissance tool to test targets to determine whether follow-up diamond drilling was warranted. Of 88 drill holes completed by this RC drilling, 45 targets returned anomalous radioactivity in excess of 500 counts per second. Several of these anomalies are now termed the Eastern Extension, Pulse and Spark zones, on which all had subsequently drilling. Other zones discovered during 2011 will be followed-up in 2012.



## KIVALLIQ REGION

### URANIUM

Analytical results from the drilling have not been made public. Surface exploration in 2011 included 5,470 line-km of airborne geophysical surveys and 1,640 line-km of ground geophysical surveys, prospecting, mapping and soil sampling.

The company intends to incorporate all results into the inferred resource estimations at Lac Cinquante, and release an updated estimate in early 2012.

674	KIGGAVIK
Operator, Partners	AREVA Resources Canada Inc., Daewoo International Corporation, JCU Exploration (Canada) Co. Ltd.
Commodity	Uranium
NTS	66A/05, 66A/06, 66A/11, 66A/12
Location	80 km west of Baker Lake

The Kiggavik project west of Baker Lake consists of 21 mineral claims (St. Tropez claims) and 37 mining leases (previously split into the Kiggavik and Sissons properties). Kiggavik is a joint venture project with AREVA Resources Canada Inc. as the operator and JCU Exploration (Canada) Co. Ltd. and Daewoo International Corporation as partners. The property consists of several mineralized deposits (Main, Centre, East, Andrew Lake and End) and two prospects (Bong and Sleek).

The Kiggavik deposit is located 2 km south of the Thelon Fault which is the faulted contact between basement metasedimentary units and the Thelon sandstone. Altered metasediments are the main host rocks for the uranium mineralization with lesser amounts of mineralization occurring in altered granite and intrusive rocks. Generally, mineralization occurs as pitchblende and coffinite in silica-depleted alteration zones comprised of illite and sericite. Late-stage cross-cutting diabase dikes are not mineralized within the deposit. The Thelon Fault to the north and the Sissons Fault to the south of the deposit area are interpreted to have created a conduit system for the mineralization. All of the project's major uranium deposits, including Kiggavik and Sissons (Andrew Lake and End), lie along these fault structures.

At Andrew Lake, mineralization is comprised mostly of pitchblende and is lithologically controlled within a shear zone complex. Higher grades of mineralization are located along and next to minor faults and ductile fluid conduits. By contrast, the End deposit contains local high-pressure zones within the metasediments. These zones are interpreted to have created a highly-faulted region where listric and high-angle normal faults have produced a mineralized horst and graben terrain.

Geological resource estimates from the project proposal submitted to regulators in 2008 determined that Kiggavik contains 40.40 million lbs  $U_3O_8$ , Andrew Lake contains 59.10 million lbs  $U_3O_8$ , and End contains 34.47 million lbs  $U_3O_8$ . Collectively, the reserves are estimated at more than 114.00 million lbs  $U_3O_8$  and would support a 17-year mine-life, based on an annual production rate of approximately 8.00 million lbs of uranium (as  $U_3O_8$  yellowcake).

Originally the 2011 field season was budgeted to include 6,500 m of drilling; by the end of the season AREVA had completed 6,192.1 m. The majority of the drilling – 2,669.6 m over six drill holes – took place on the End deposit, extending the known mineralization of the north pod and outlining a possible northwest extension of the south pod. Three holes (1,104 m) were drilled on the Bong prospect, the results of which extended the north pod mineralization to the southwest. One hole was drilled south of Andrew Lake, for 1,104 m, and three holes were drilled at Sleek Lake for 1,479.5 m. No mineralization was intersected at Sleek Lake, but the results did add to the general geological knowledge of the area. Two geotechnical holes totalling 504 m were drilled on the Kiggavik deposit. Limited ground resistivity geophysical programs were also conducted over Sleek Lake and the Bong prospect.

The company is currently moving through the environmental assessment process. In May 2011, the Nunavut Impact Review Board issued its Environmental Impact Statement guidelines to AREVA. The company has indicated that it will prepare its Draft Environmental Impact Statement for submission to the Nunavut Review Board by the end of 2011. AREVA has been making regular community presentations regarding the status of the Kiggavik project to Baker Lake.

# KIVALLIQ REGION

## URANIUM

675	676	677	NORTH THELON (JUDGE SISSONS <sup>1</sup> , KIGGAVIK NORTH <sup>2</sup> , KIGGAVIK SOUTH <sup>3</sup> , SCHULTZ LAKE <sup>4</sup> , TANQUERAY BLOCK <sup>5</sup> , UKALIK <sup>6</sup> )
678	679	680	
Operator, Partner			Forum Uranium Corp. <sup>1,6</sup> , Agnico-Eagle Mines Limited <sup>1,4</sup>
Commodities			Uranium
NTS			66A/03 - 66A/07, 66A/09 - 66A/12, 66B/01, 66B/08, 66B/09
Location			50 km west of Baker Lake

The North Thelon project west of Baker Lake covers almost 300,000 ha within the Thelon Basin. The project is 100 per cent-owned by Forum Uranium. An option agreement existed with Cash Minerals Ltd. for Cash to acquire 60 per cent of the project, but that agreement was terminated in the summer of 2010.

Forum's 2011 program at North Thelon had a focus on the Tarzan showing in the southwest of the property. Seven ground-based gravity surveys were performed and soil sampling took place on targets identified from those surveys. The company also conducted a 2,036 m drill program and staked 52 new claims in the area around the Tarzan showing. The program totalled \$2.8 million; this budget includes the purchase of Tanqueray Resources Ltd.'s Thom Lake camp, which was transported to the Forum camp site.

No results from the program have been released.

681	<b>THELON BASIN</b>
Operator, Owner	Titan Uranium Inc., Mega Uranium Ltd.
Commodity	Uranium
NTS	66B/14 - 66B/16, 66G/01, 66G/02, 66G/08, 66H/05
Location	150 km northwest of Baker Lake

The Thelon Basin project covers 684 km<sup>2</sup> northwest of Baker Lake in the northwest region of the Thelon Basin. The project is a joint venture agreement between Titan Uranium Inc. and Mega Uranium Ltd. Under the terms of

the agreement, Mega invested \$5.0 million to earn a 51 per cent interest in the project. Titan remains the operator.

Previous exploration work on the property includes: airborne magnetic and radiometric surveys in 2007; diamond drilling from 2006 to 2008 for a total of 43 drill holes; and prospecting and till sampling. In 2009, the Thelon Basin project was placed in care and maintenance mode.

Work was planned on the property for the 2011 field season, but no details or results have been released.

Repositioning tents at Thom Lake campsite  
Courtesy of Forum Uranium



# KIVALLIQ REGION

## INACTIVE PROJECTS

### INACTIVE PROJECTS

In 2011, Shear Diamonds Ltd. and joint venture partner Stornoway Diamond Corporation did not conduct any work at the **Churchill**, **Churchill West** and **Chesterfield Inlet** diamond projects, all located near the hamlet of Chesterfield Inlet. The latter project was the subject of an option agreement with Rio Tinto Exploration Canada Inc., who participated in a program on the property in 2010. In 2011, Rio Tinto chose to discontinue the option agreement. The **Napajut** gold-diamond project located west of Arviat was optioned by Shear Diamonds Ltd. in 2009 from Exploratus Ltd. Shear has since withdrawn from the option; no work was reported on the property in 2011, but Exploratus has indicated it intends to drill at Napajut in 2012.

Diamonds North Resources Ltd. acquired a block of prospecting permits east of the Nanuq property in 2008. All but two of these **Diamonds North Permits** have been relinquished, although a number of claims were staked in 2009 within the area of two of the relinquished permits. No work has been reported on this property.

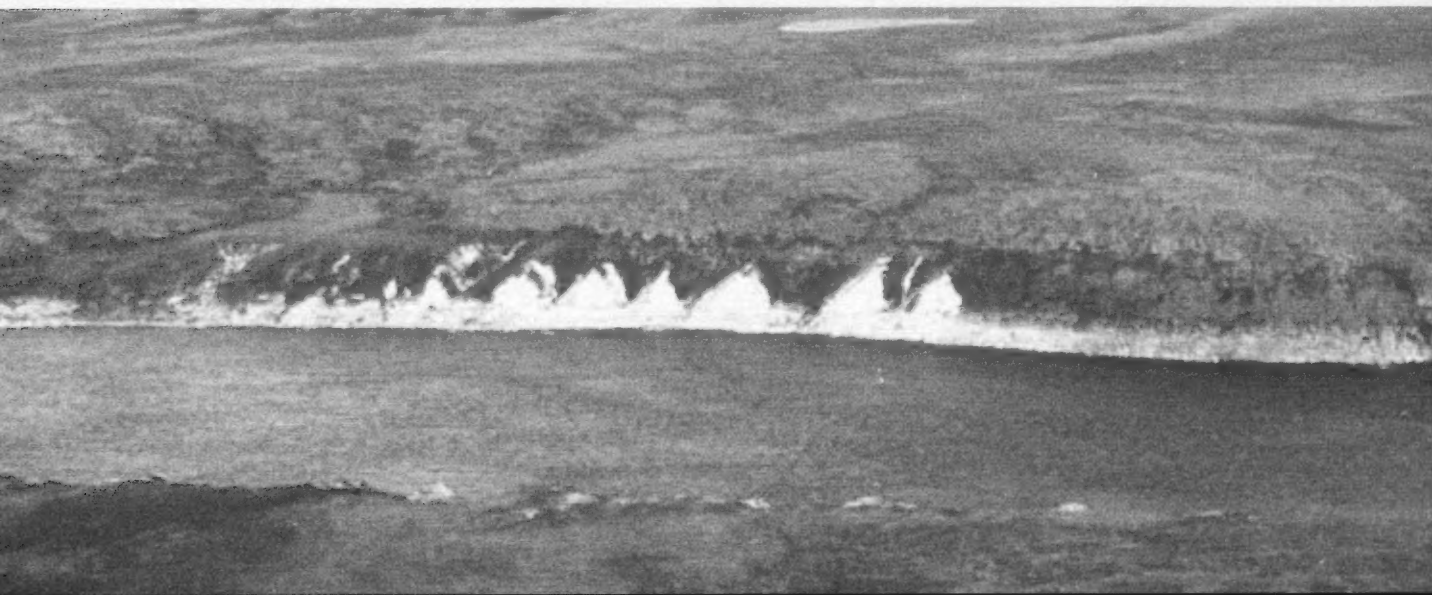
A number of gold projects in the Kivalliq region did not have activity in 2011. Among these are the **Cache** project, owned by Alix Resources Corp.; **SY**, which is owned by Kaminak Gold Corporation and was formerly optioned by Corsa Capital Ltd.; and the **Muskox** and **Parker Lake** projects controlled by Agnico-Eagle Mines Limited. Uranium North Resources' **KAM** gold project located in the western Kivalliq was inactive as was its **South Baker** uranium project nearby. The company's **Yathkyed Lake** uranium project also

was dormant in 2011. Ur-Energy's **Bugs** uranium project lies just south of the South Baker project; work was last reported from the property in 2008.

Several uranium projects that overlie the Thelon or Baker Lake basins remained dormant in 2011. The **Baker Lake Basin** project, owned by Pacific Ridge Exploration Ltd., is located southeast of the community of Baker Lake. A drill program was conducted on the property in 2008 by then-operator Aurora Energy Resources Inc. Bayswater Uranium Corporation with its joint venture partner Strongbow Exploration Inc. control five properties: Amer East, Amer West, Itza Lake, Permit 1, Permit 2. These comprise the **Canada Uranium Joint Venture** project. The project is located northwest of Baker Lake, and overlies the Thelon Basin and Amer Group. Work was last reported at the properties in 2008. The **Ruby Hill** project, owned by Ruby Hill Exploration Inc., and the **Garry Lake** project, owned by Uravan Minerals Inc., both also overlie the Thelon Basin. No work was carried out at either project in 2011.

A block of mineral claims surrounding a central mineral lease is owned by Cameco Corporation and this ground makes up the **Nueltin Lake** project. The project is located in the southwest corner of the Kivalliq region, and is situated at the contact between Wollaston Group metasedimentary rocks and the Hurwitz Group low-grade metasedimentary rocks. Uranium and gold occurrences have been identified in the area. Work on the property was last reported in 2009.

*Sandy bluffs, Thelon River  
Courtesy of AANDC*





# KIVALLIQ REGION

## INACTIVE PROJECTS

Number	Project	Operator
DIAMONDS		
 486 – 488	Chesterfield Inlet, Churchill, Churchill West	Shear Diamonds Ltd.
 489	Diamonds North Permits	Diamonds North Resources Ltd.
GOLD		
 544	Cache	Alix Resource Corp.
 545, 547	Muskox, Parker Lake	Agnico-Eagle Mines Limited
 546	Napajul	Shear Diamonds Ltd.
 548	KAM	Uranium North Resources Corp.
 549	SY	Kaminak Gold Corporation
URANIUM		
 684	Baker Lake Basin	Pacific Ridge Exploration Ltd.
 685	Bugs	Ur-Energy Inc.
 686 – 690	Canada Uranium Joint Venture (Amer East, Amer West, Itza Lake, Permit 1, Permit 2)	Bayswater Uranium Corporation
 691	Garry Lake	Uravan Minerals Inc.
 692	Nueltin Lake	Cameco Corporation
 693	Ruby Hill	Ruby Hill Exploration Inc.
 694 – 699	South Baker (Hawk, JG, Kam, L1, SW Hawk, Yathkyed Lake)	Uranium North Resources Corp.

Please refer to the map on page 37 for the location of inactive projects in the Kivalliq region.

# QIKIQTAALUK REGION

## OVERVIEW

The Qikiqtaaluk region is the largest administrative region of Nunavut, encompassing an area of 1,040,418 square kilometres (km<sup>2</sup>). The region is made up primarily of the islands of the Canadian Arctic archipelago, including Baffin, Devon, Cornwallis, Bathurst, Ellesmere, and many smaller islands. Also included within the Qikiqtaaluk region is the northern part of Melville Peninsula and the Belcher Islands in southern Hudson Bay. The city of Iqaluit, Nunavut's territorial capital, is located on Baffin Island at the head of Frobisher Bay. Iqaluit is a major centre for supplies and services in support of exploration in the region. Other communities that currently provide services and labour to exploration projects include Hall Beach, Pangnirtung, Pond Inlet, Resolute and Sanikiluaq. The hamlets of Arctic Bay, Cape Dorset, Clyde River, Grise Fiord, Igloodik, Kimmirut and Qikiqtarjuaq are also situated in this region and provide support to local projects.

The Qikiqtaaluk region is underlain by rocks of the Archean and Proterozoic-aged Churchill, Arctic Platform, Franklinian and younger geologic provinces. As a result of the variability of the rocks, the region hosts diverse mineral deposits and occurrences including diamondiferous kimberlites, iron ore (as hematite and magnetite), base metals, gold, nickel-copper-platinum group elements (Ni-Cu-PGE), and gemstones.

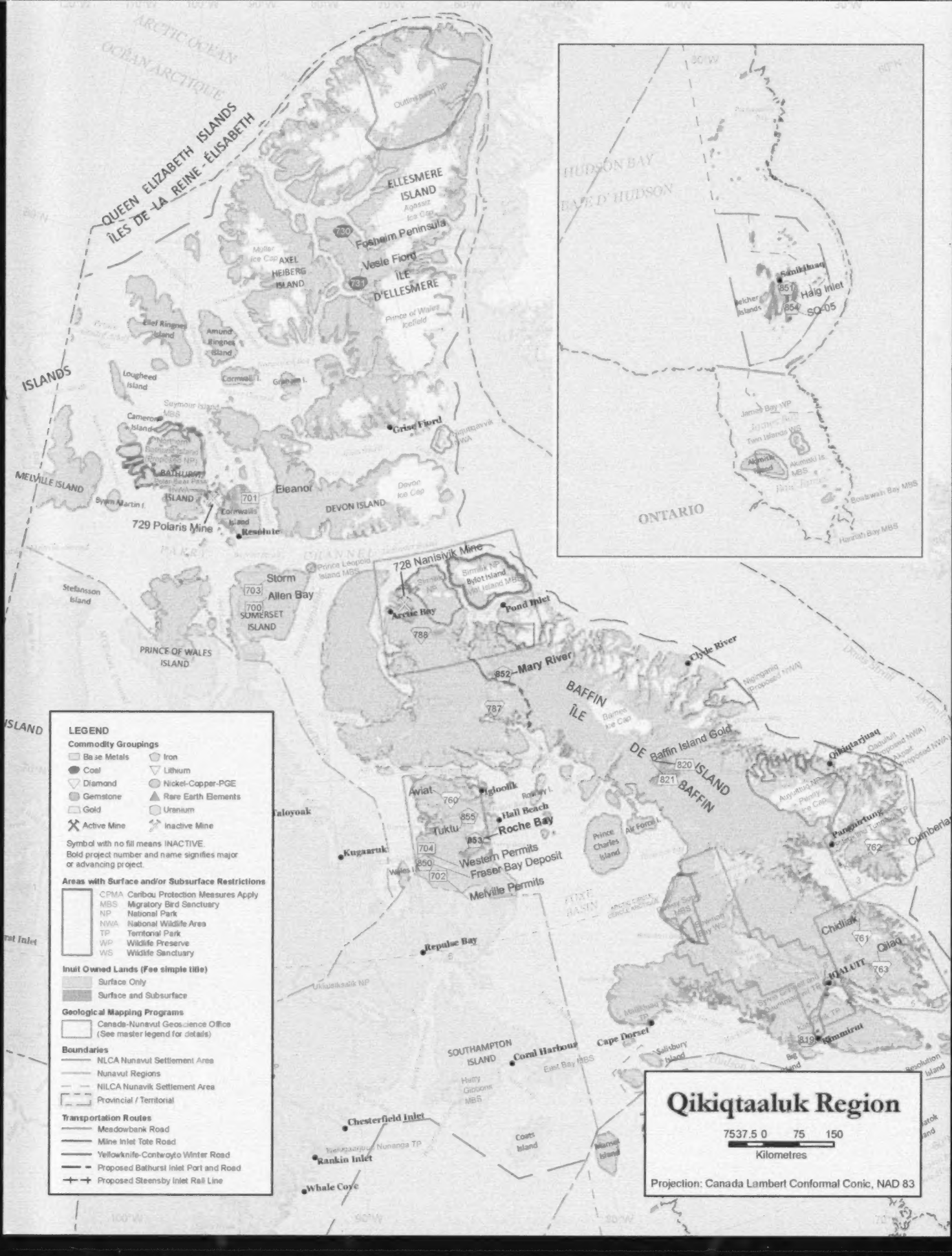
Several exploration projects were active throughout the Qikiqtaaluk region in 2011. Following the acquisition of Baffinland Iron Mines Corporation by ArcelorMittal and Nunavut Iron Ore Acquisition Inc. early in 2011, exploration and geotechnical work has accelerated at the Mary River iron project. Regional fieldwork led to the discovery of several new high-grade iron prospects which could potentially contribute to future production. Advanced Explorations Inc. has continued its evaluation of the iron ore potential of its Roche Bay and Tuktu projects, and continues to build alliances with two major steel and iron-ore consumers in China. Initially explored in the late 1960s and 1970s for metals, the Melville Peninsula has seen renewed interest from explorers resulting in the acquisition of a significant number of new prospecting permits and mineral claims, targeting the precious and base metals potential.

In September, Peregrine Diamonds Ltd., and its joint venture partner BHP Billiton, completed a large diamond exploration program on its Chidliak property northeast of Iqaluit. With the Hall Peninsula established as a new diamond district, Peregrine Diamonds Ltd. is planning further exploration work including bulk sampling of kimberlite and extensive drilling for next year.

Thirty-seven of the 106 prospecting permits that were issued for 2011 are located in the Qikiqtaaluk region.

Sunrise over Deposit No. 1, Mary River  
January 19, 2010





# LEGEND

## Commodity Groupings

- Base Metals
- Coal
- Diamond
- Gemstone
- Gold
- Active Mine
- Iron
- Lithium
- Nickel-Copper-PGE
- Rare Earth Elements
- Uranium
- Inactive Mine

Symbol with no fill means INACTIVE.  
Bold project number and name signifies major or advancing project.

## Areas with Surface and/or Subsurface Restrictions

- CPMA Caribou Protection Measures Apply
- MBS Migratory Bird Sanctuary
- NP National Park
- NWA National Wildlife Area
- TP Territorial Park
- WP Wildlife Preserve
- WS Wildlife Sanctuary

## Inuit Owned Lands (Fee simple title)

- Surface Only
- Surface and Subsurface

## Geological Mapping Programs

- Canada-Nunavut Geoscience Office (See master legend for details)

## Boundaries

- NLCA Nunavut Settlement Area
- Nunavut Regions
- NILCA Nunavut Settlement Area
- Provincial / Territorial

## Transportation Routes

- Meadowbank Road
- Mine Inlet Tote Road
- Yellowknife-Contwoyo Winter Road
- Proposed Bathurst Inlet Port and Road
- Proposed Steensby Inlet Rail Line

# Qikiqtaaluk Region

75 37.5 0 75 150  
Kilometres

Projection: Canada Lambert Conformal Conic, NAD 83



# QIKIQTAAALUK REGION

## BASE METALS

### BASE METALS

700	701	ALLEN BAY COPPER <sup>1</sup> ; ELEANOR <sup>2</sup>
Operator/Owner		ColtStar Ventures Inc.
Commodities		Copper <sup>1</sup> ; Zinc, Lead <sup>2</sup>
NTS		58C/02, 58C/06, 58C/07 <sup>1</sup> , 58G/06, 58G/07, 58G/11 <sup>2</sup>
Location		150 km south-southeast of Resolute <sup>1</sup> ; 80 km north-northeast of Resolute <sup>2</sup>

The Allen Bay Copper project comprises five prospecting permits with a total area of approximately 111,750 hectares (ha) that were issued to ColtStar Ventures Inc. in 2011. The property was acquired based upon a regional evaluation of the Boothia Uplift (known to host Mississippi Valley-type carbonate-hosted zinc-lead deposits), and a review of the adjacent Storm property owned by Commander Resources Inc. The geology of the project area is considered prospective for copper mineralization and specifically for sediment-hosted copper deposits.

As diamondiferous kimberlites have been discovered elsewhere on Somerset Island and on the Boothia Peninsula to the south, the property is also considered by the company to have good potential for further discoveries.

No work was conducted on the Allen Bay project in 2011, but the company is planning a regional mapping, prospecting and sampling program over the property in 2012. An airborne electromagnetic survey is also planned, with possible follow-up ground geophysical surveys and diamond drilling.

The Eleanor project, located at the north end of Cornwallis Island, was acquired by ColtStar in 2010. The property comprises six prospecting permits with a total area of approximately 72,300 ha. The project area sits within the Boothia Uplift, host to the past-producing Polaris Mine, located approximately 35 km to the west on Little Cornwallis Island.

ColtStar plans to conduct a limited induced polarization ground geophysical survey over electromagnetic anomalies identified on the property by a historic airborne geophysical survey. The company also considers Eleanor to be prospective for diamonds, and will conduct till sampling in

2012 to search for kimberlite indicator minerals (KIM) near circular features defined through radar imaging.

702	MELVILLE PERMITS
Owner/Operator	Vale Canada Limited
Commodities	Copper, Nickel
NTS	46B/10, 46M/16, 46N/13, 46N/14, 47B/01, 47B/02, 47B/07, 47B/08
Location	170 km southwest of Hall Beach

Vale Canada Limited acquired 16 prospecting permits and 24 mineral claims covering 314,750 ha on the Melville Peninsula in 2011. The property is located southwest of the community of Hall Beach, and covers areas underlain by mafic and ultramafic units in the Roche Bay and Prince Albert greenstone belts. Vale is undertaking a comprehensive compilation of data to further evaluate the Ni-Cu-PGE potential of the area.

703	STORM
Operator/Owner	Commander Resources Ltd.
Commodities	Copper, Zinc, Silver
NTS	58C/10, 58C/11
Location	120 km south-southeast of Resolute

The Storm project comprises four prospecting permits with a total area of approximately 84,300 ha. Located on the northwest corner of Somerset Island, the property covers four zones of carbonate-hosted copper mineralization and the Seal carbonate-hosted zinc-silver deposit; all were discovered by Teck Cominco in the 1990s.

# QIKIQTAAALUK REGION

## BASE METALS

Commander's interest in the property is focused on the four zones of copper mineralization: 2200N, 2750N, 3500N and 4100N. These zones are located within an exposed 7 km portion of a 30-km structural corridor. In July 2011, the company conducted an airborne geophysical survey over an area of 350 km<sup>2</sup> that included the known copper mineralization. The results are being used to identify any continuation of the copper mineralization down-dip and along-strike of the zones, and to identify other areas with similar electromagnetic (EM) signatures. No results from the airborne survey have been released.

In late November 2011, Commander announced the signing of an option agreement with Aston Bay Ventures. Further field work, including a drill program, is planned for 2012.

704 WESTERN PERMITS	
Operator/Owner	Advanced Explorations Inc.
Commodities	Copper, Nickel
NTS	46B/07
Location	170 km west-southwest of Hall Beach

The Western Permits project, or West Melville Area, lies within the Prince Albert Terrain between Committee Bay and Parry Bay on the Melville Peninsula.

In 2009, the Geological Survey of Canada (GSC) reported anomalous nickel, copper and silver values (including native copper and silver) from hydrothermally altered basaltic rock in the Roche Bay greenstone belt. Advanced Exploring Inc. (AEI) acquired new tenure over this area in 2010. Additional work by the GSC in 2010, resulted in the collection of a sample containing massive to disseminated sulphide mineralization with high values of nickel, copper and cobalt at Adamson River, located west of the project area. The company considers that this mineralization could be associated with ultramafic units in the Prince Albert greenstone belt.

AEI's activities for 2011 included significant exploration and staking in the West Melville region. A reconnaissance

evaluation of the project's magmatic nickel-copper prospects was added to the \$1.5 million exploration program's original focus on silver and copper-gold potential in volcanogenic massive sulphide-type mineralization and molybdenum prospects.

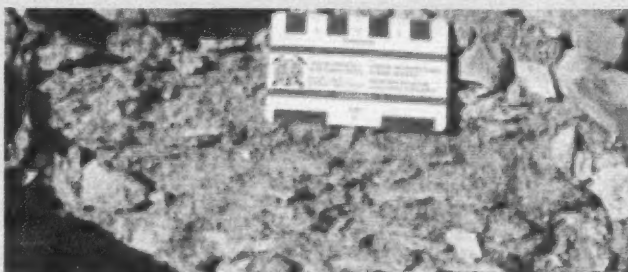
Early in 2011, AEI acquired 57 claims covering 53,240 ha and increased its total mineral tenure to more than 227,000 ha. Exploration efforts led to the discovery of five new occurrences of nickel-copper mineralization hosted in mafic and ultramafic units. A total of 330 rock samples were collected and nine samples yielded assay results ranging from 0.11 to 0.86% Ni, up to 0.87% Cu, and between 0.01 and 0.05% Co. The highest nickel value obtained was from a gossanous komatiitic unit characterized by a distinct highly magnetic anomaly.

Three grab samples collected from a zone of hydrothermally altered basaltic rock with copper, silver and gold mineralization yielded assay values with a range of 0.26 to 1.93% Cu, 5.33 g/t Ag, and 0.11 to 0.35 g/t Au. Another grab sample returned 0.53 g/t Au. The sulphide mineralization appears to be associated with quartz-carbonate stockwork veins.

Near Folster Lake, molybdenum mineralization in quartz veins is found in granitoid basement rocks near the granite-greenstone contacts and in granitic dikes cross-cutting the greenstone rocks. Mineralized veins with a strike-length of five to 50 metres (m) and widths of five to 100 m were sampled. Assays up to 3.19% Mo confirmed some reported historical high-grade results. Results of rare earth element analyses of seven samples taken during the 2011 season are pending.

The company expects to continue evaluation of the property in 2012. Exploration plans under consideration include additional ground prospecting, geological mapping, extensive sampling, diamond drilling, and an airborne geophysical survey over priority areas interpreted from results obtained in 2011.

Sulphide mineralization, Prince Albert greenstone belt, Melville Peninsula  
Courtesy of GSC



# QIKIQTAAALUK REGION

## COAL and DIAMONDS

### COAL

730	731	FOSHEIM PENINSULA, VESLE FIORD
Operator/Owner		Canada Coal Inc.
Commodity		Coal
NTS		49G/08 – 49G/10, 49G/15, 49G/16, 49H/12, 49H/13, 340B/02, 340B/03; 49E/13, 49H/03, 49H/04
Location		390 km north-northwest of Grise Fiord, 310 km north-northwest of Grise Fiord

In 2011, Canada Coal Inc. acquired 75 coal licences with a total area of approximately 988,900 ha, distributed in nine blocks, on Ellesmere Island and Axel Heiberg Island. This general area was previously explored for coal by a number of companies during the early 1980s.

The company intends to explore these licences for an anticipated multi-billion tonne metallurgical, or coking, coal deposit. Exploration will initially focus on coal deposits hosted within Late Cretaceous and Tertiary sediments of the Eureka Sound Formation, which occurs along the southwestern portion of Ellesmere Island. Historical exploration has identified four areas with significant coal accumulation: Fosheim Peninsula, Vesle Fiord, Strathcona Fiord and Stenkul Fiord.

*Coal seams in the Upper Cretaceous Kanguk Formation, Salmon River (near Pond Inlet)*

*(Courtesy of Government of Nunavut)*

No field work was conducted on the properties in 2011 although the company has been actively conducting research on existing information and visiting the communities of north Baffin Island for the purpose of exchanging information. Exploration activities are proposed for 2012 and will focus on Fosheim Peninsula and Vesle Fiord.

### DIAMONDS

760	AVIAT
Operator, Partners	Stornoway Diamond Corporation, Hunter Exploration Group
Commodity	Diamonds
NTS	47C/01, 47C/08, 47D/03 - 47D/06
Location	70 km west of Igloodik

The Aviat project is located in the central part of Nunavut on the northern end of the Melville Peninsula. It is a joint venture project that is 90 per cent-owned and operated by Stornoway Diamond Corporation and 10 per cent-owned by Hunter Exploration. At least 12 kimberlite bodies have been discovered within a few kilometres of one another and are interpreted to comprise a gently-dipping sequence of rocks termed the Eastern Sheet Complex. The complex is a series of multi-phase diamondiferous pipes, dikes or sheets bounded to the southwest by the northwest-trending Centennial Fault. Some of the known kimberlites (AV-1 West, AV5 and AV9) are located on the southwest side of the fault. Significant exploration activity has taken place on the property over the last decade. As part of its diamond grade assessment, Stornoway collected several mini-bulk samples in 2008.

No fieldwork was completed in 2011 at Aviat; however, new microdiamond results from material collected in 2008 were released in March. A 926.5 kilogram (kg) sample from AV9 yielded 677 diamonds larger than the 0.106 millimetre (mm) sieve size. Fifteen of these diamonds were larger





# QIKIQTAAALUK REGION

## DIAMONDS



Chidliak camp  
Courtesy of Peregrine Diamonds

than the 0.850 mm sieve size, with a total weight of 0.515 carats. From unspecified kimberlites in the Eastern Sheet Complex, 226 diamonds with sizes greater than the 0.106 mm sieve size were recovered from 219.8 kg of drill core. Five of these microdiamonds were greater than the 0.850 mm sieve size and had a combined weight of 0.227 carats. The largest diamonds recovered were 0.156 carats and 0.083 carats from AV9, and a 0.092 carat stone from the Eastern Sheet Complex.

761	CHIDLIAK
Operator, Partner	Peregrine Diamonds Ltd., BHP Billiton Diamonds Inc.
Commodity	Diamonds
NTS	250/15, 250/16, 25P/13, 26A/04, 26A/05, 26A/12, 26B/01 - 26B/03, 26B/06 - 26B/11, 26B/14 - 26B/16
Location	115 km northeast of Iqaluit

Chidliak, the largest diamond exploration project in Nunavut, is located on the Hall Peninsula on Baffin Island, approximately half-way between the communities of Pangnirtung and Iqaluit. BHP Billiton Diamonds Inc. met

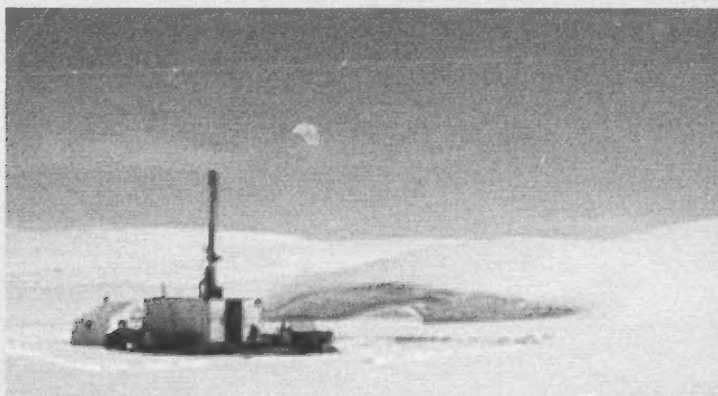
its expenditure requirements in 2010 to earn a 51 per cent interest and gain majority control of the project. Peregrine Diamonds Ltd., holding a 49 per cent interest, remained the operator of exploration in 2011.

Drill core results released in December 2010 from a 14.11 tonne mini-bulk sample obtained from the CH-6 kimberlite in the Southern Focus area yielded 523 commercial-sized diamonds larger than a sieve size of 0.850 mm. Nine individual microdiamonds weighed more than 0.5 carats, of which two were more than one carat in weight and the largest was an off-white, 1.29 carat diamond. A total of 40.04 carats was recovered for an overall average grade of 2.84 carats per tonne. At CH-7, kimberlite units from the magmatic North Lobe and volcanoclastic South Lobe were drill-sampled using a combination of reverse circulation (RC) and core methods. From 359.5 kg of North Lobe material, 681 microdiamonds larger than the 0.106 mm sieve size were recovered and 17 exceeded the 0.850 mm sieve size. The aggregate weight of 569.0 kg of material from the South Lobe produced 1,208 microdiamonds, with 24 larger than the 0.850 mm sieve size and a total weight of 0.386 carats. Analyses from additional RC drilling at CH-1 confirmed the presence of coarse microdiamonds.

From the Northern Area, the company reported diamond results from CH-28, a kimberlite with a strong mantle signature. A 32.54 tonne mini-bulk sample of subcrop material yielded 140 microdiamonds larger than a sieve size of 0.850 mm with a total weight of 8.94 carats, equivalent to a grade of 0.27 carats per tonne.

Early in 2011, the company reported coarse diamond size results from the CH-29 and the CH-45 kimberlites (discovered in 2010) within the Southern Focus area. These samples yielded 26 and 158 microdiamonds, respectively.

CH-54 kimberlite, Chidliak project  
Courtesy of Peregrine Diamonds



# QIKIQTAAŁUK REGION

## DIAMONDS

larger than the sieve size 0.106 mm. Each kimberlite had two diamonds larger than a sieve size of 0.850 mm for a combined weight of 0.02 carats for CH-29 and 0.091 carats for CH-45. In November, coarse diamond size distributions were confirmed from 535.1 kg and 374.8 kg samples taken from CH-44 and CH-45, respectively. CH-44 returned 766 diamonds larger than the 0.106 mm sieve size with 94 per cent of the microdiamonds larger than the 0.600 mm sieve size and characterized as white/colourless, off-white or yellow in colour. Thirteen microdiamonds were larger than the 0.850 mm sieve size with a total weight of 0.197 carats. CH-45 yielded 170 diamonds larger than the 0.106 mm sieve size. Two microdiamonds from the volcanoclastic unit of CH-45 were larger than the 1.700 mm and 2.360 mm sieve sizes and are described as a white/colourless 0.06 carat octahedron and a 0.21 carat gray cubic form.

Expenditures for 2011's exploration program at Chidliak reached \$17.7 million. The program was comprehensive and included prospecting, airborne and ground-based geophysics, core and RC drilling, environmental and archaeological surveys, till sampling and quaternary mapping. Drilling on the property consisted of 8,468 m of core drilling and 1,530 m of RC drilling. Helicopter-based magnetic and electromagnetic surveys totaled 11,105 line-km and focused on the northern part of the property. This geophysical program led to the discovery of nine new kimberlites, six confirmed through core drilling and three through RC drilling. There are now 59 known kimberlites at Chidliak. Generally, the kimberlites expressed at Chidliak are inferred to be up to a few hectares in size. Of the seven kimberlites currently deemed to have economic potential, four are greater than one hectare in size. The largest, CH-3, is more than five hectares in size, indicating the potential for large tonnages from other kimberlites. Two kimberlite float occurrences not linked with any known anomalies suggest that other unidentified pipes may be found. The suite of kimberlites discovered to-date exhibit both intrusive and extrusive features as well as a range of magnetic and topographic characteristics.

Three of the newly-discovered kimberlites, CH-52, CH-58 and CH-59, were sampled and returned high diamond counts. CH-52, yielded 252 diamonds greater than 0.106 mm sieve size from a 208.4 kg sample. A 194.9 kg sample from CH-58 yielded 428 diamonds greater than the 0.106 mm sieve size, with one greater than the 0.850 mm sieve size. A 169.2 kg sample from CH-59 revealed 174 microdiamonds, four were larger than the 0.850 mm

sieve size with a combined weight of 0.047 carats; one is characterized as white/colourless, and three as off-white.

Past exploration on the property was also conducted for platinum-group elements, gold and base metals, but no further work has been reported for these commodities in 2011. Planning for the 2012 field program will focus on bulk sampling using large diameter RC drilling to establish grade and initial valuations for some of the high-potential kimberlites. In November 2011, BHP Billiton announced that it was examining its options for its Canadian diamond properties including both the Chidliak property and the Ekati mine in the Northwest Territories. In late December, Peregrine became the 100 per cent-owner of Chidliak although BHP has retained a two per cent royalty on any future mineral production.

<div>762</div> <div>763</div> <div>CUMBERLAND, QILAQ</div>	
Operator/Owner	Peregrine Diamonds Ltd.
Commodity	Diamonds
NTS	16E/03, 16E/04, 16E/05, 16E/10, 16E/12, 16E/14, 16E/15, 16L/01 - 16L/04, 16L/06, 16L/08, 26H/07, 26H/09 - 26H/11, 26H/13, 26H/15, 26H/16, 26I/01, 26I/02, 25O/01, 25O/02, 25O/07 - 25O/09, 25P/04, 25P/05, 25P/13, 26A/03, 26A/04, 26A/06, 26A/11, 26A/12, 26B/13, 26G/09
Location	60 km northeast of Pangnirtung, 110 km northeast of Iqaluit

Peregrine Diamonds initially acquired prospecting permits covering most of Cumberland Peninsula in February 2010. Following its 2010 field program, Peregrine reduced the size of its Cumberland project holdings to 527,730 ha in 2011. The Cumberland project had a budget of \$300,000 to conduct a reconnaissance exploration program to investigate the diamond and metal potential in

# QIKIQTAAALUK REGION

## DIAMONDS and GOLD

2011. Although no KIM were recovered from the 341 till reconnaissance samples collected in 2010, the company identified anomalous geochemical results from 35 locations. Nineteen of these anomalies are gold-bearing and 16 contain Ni-Cu-PGE. One target of interest yielded values of 1,732 parts per million Cu and 1,163 parts per million Ni. A mineralized boulder from a gossanous area returned assay results of 4.10 g/t Ag, 0.3% Zn and 603 parts per million Cu. Planned follow-up work involved prospecting, detailed mapping and sampling. Results from 112 till samples collected during the year have not been reported.

The Qilaq property is located northeast of Iqaluit on the Hall Peninsula, and is 100 per cent-owned by Peregrine Diamonds. A 1 km buffer zone within Qilaq is subject to earn-in rights by BHP Billiton as part of its joint venture agreement on the adjacent Chidliak property. Since 2010, Peregrine has relinquished a number of the prospecting permits, reducing the Qilaq project area to 436,540 ha.

Two kimberlite pipes, Q1 and Q2, were discovered from ground exposures in 2010 and lie outside the buffer zone. Exploration on Qilaq continued to focus on identifying additional kimberlite pipes and on further evaluation of the metal potential associated with the extensive gossans in the region.

In 2011, the exploration budget for Qilaq was \$1.0 million; work planned included targeted airborne and ground geophysical surveys, drilling and till sampling. A 3,700 line-km airborne geophysics survey identified 10 sites with anomalous magnetic characteristics. Follow-up ground magnetic surveys were carried out to better delineate the targets.

A third pipe (Q3) was discovered at one broad, low magnetic anomaly and confirmed by three angled RC drill holes. The Q3 kimberlite is inferred to have a surface expression of 2.5 ha, somewhat larger than the diamondiferous Q1 and Q2 pipes. A large amount of kimberlite retrieved from the RC drilling at kimberlite pipes Q1 and Q3 will be analysed by caustic fusion. This will improve the understanding of the microdiamond size distribution at Qilaq obtained from the 62.7 kg and 241.5 kg surface samples collected in 2010 from Q1 and Q2, respectively. Microdiamond results are pending.

Exploration plans for 2012 include identifying additional kimberlite and metal prospects based on the 2011 ground geophysical survey and sediment sampling results.

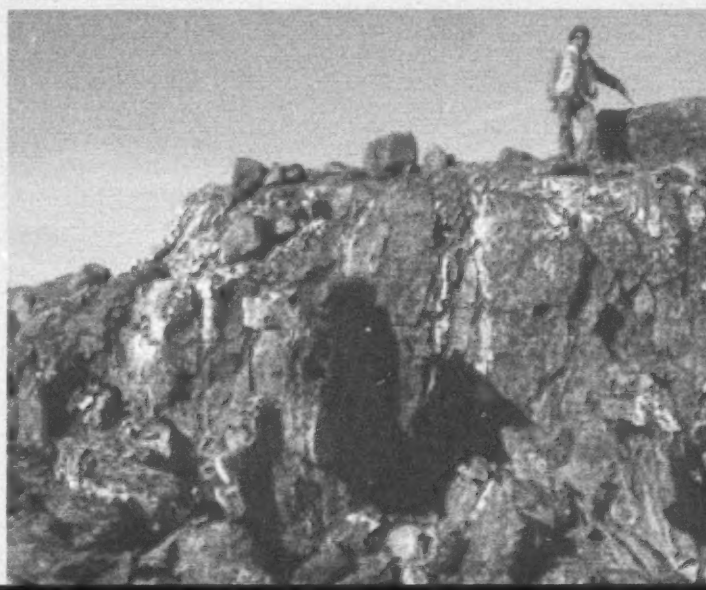
## GOLD

820	821	BAFFIN ISLAND GOLD (BRAVO LAKE, QIMMIQ)
Operator, Partner	Commander Resources Ltd., AngloGold Ashanti Holdings Plc	
Commodity	Gold	
NTS	27B/05, 27B/11, 27B/12; 27B/12, 37A/06 – 37A/10	
Location	220 km south of Clyde River; 250 km south of Clyde River	

A \$3.0 million exploration program, financed by AngloGold Ashanti under the terms of the \$20 million joint venture agreement announced in 2009, was conducted on Commander Resources' Baffin Island Gold project in 2011. The program focused on the sediment-hosted Kanosak gold prospect that has been identified over an area of 4 km by at least 300 m. The Kanosak prospect comprises two silicified strata, averaging 20 m and 10 m in thickness, respectively, which carry arsenopyrite-associated gold mineralization. Work in 2011 included a 3-D induced polarization survey to expand the prospect area and to help identify drill targets for the 2012 season.

Prospecting and regional mapping was carried out over the 150 km-long Foxe Fold belt. As part of this regional program, the claims staked by the company in 2009 were explored for the first time since being acquired. No results from the work done in 2011 have been reported.

*Prospect evaluation at Baffin project*  
*Courtesy of Commander Resources*





# QIKIQTAAALUK REGION

## IRON

### IRON

850	FRASER BAY DEPOSIT
Operator/Owner	West Melville Iron Company Ltd., Roche Bay plc
Commodity	Iron
NTS	47B/02
Location	185 km southwest of Hall Beach

In 2011, West Melville Iron Company Ltd. signed an option agreement with Roche Bay plc to earn a 70 per cent interest in the Fraser Bay deposit located on the west side of Melville Peninsula. The project comprises a single mineral lease that is 1,306 ha in area.

Mineralized iron formations were discovered on the property in the late 1960s by Borealis Exploration Ltd. who conducted exploration from 1968 to 1970. The iron formations occurs as discontinuous layers within Prince Albert Group greenstone and quartzite, and is cross-cut by two east-west-trending faults that are visible in the magnetic signature and on the ground. The Fraser 1 to 3 zones represent fault offset segments of the same banded iron formation horizon. These zones have been defined over lengths of 1,400 m, 1,370 m and 2,740 m and average 275 m, 210 m and 100 m in width, respectively.

*Outcrop of iron ore located at the northern end of the Fraser Bay Deposit*  
Courtesy of West Melville Iron Company



*Core splitter at Haig Inlet project*  
Courtesy of AMNDC

Work conducted on the property in 2011 included a ground geophysical survey over the deposit area and a short channel sampling program over three areas. In total, 57 1 m-long channel samples were collected and analyzed, returning total iron content results ranging from 28.5% up to 68.2%. The results from the channel sampling program will be used for planning a 2012 drill program on the property.

851	HAIG INLET
Operator, Partner	Canadian Orebodies Inc., McKinnon Prospecting Ltd.
Commodity	Iron
NTS	34D/06
Location	20 km southeast of Sanikiluaq

The Haig Inlet project comprises an Exploration Agreement on part of Inuit Owned Land (IOL) Parcel SQ-05 south of Haig Inlet and two blocks of Crown mineral claims on Flaherty Island, within the Belcher Islands in southeastern Hudson Bay. The nearest community to the project is the hamlet of Sanikiluaq. The area around Haig Inlet was explored in the 1950s by Belcher Mining Corporation, targeting the Paleoproterozoic Kipalu Formation of iron-bearing rocks hosted within a sedimentary-volcanic sequence. The Kipalu Formation contains extensive



# QIKIQTAAALUK REGION

## IRON

magnetite-facies iron formation. The work by Belcher Mining outlined an unclassified resource estimated to include 907.00 million tonnes grading 27% Fe.

Canadian Orebodies signed an agreement with McKinnon Prospecting Ltd. in 2011 to acquire its interests in the portion of IOL parcel SQ-05 south of Haig Inlet. The company staked a contiguous parcel of mineral claims in March, and a further set of non-contiguous claims on the western coast of Flaherty island. The western claims are interpreted to cover a western extension of the Kipalu Formation.

Three diamond drills completed 9,117.5 m of drilling in 64 holes in 2011. Most drilling focused on a 3 km by 3 km area north of Haig Inlet, along seven profiles spaced approximately 500 m apart. The Kipalu Formation in this area is a relatively flat-lying horizon that averages 45 m in thickness. The top of the horizon lies an average depth of 59 m below surface. Assay results returned average grades of 29.2% Fe. Additional drilling outside the main target area confirmed the continuity of the iron formation with comparable thicknesses and grades. The drill program is intended to support a National Instrument 43-101 (NI 43-101) compliant resource estimate expected to be completed by the first quarter of 2012.

852	MARY RIVER
Operator/Owner	Baffinland iron Mines Corporation
Commodity	Iron
NTS	37F/15, 37F/16, 37G/01, 37G/02, 37G/05, 37G/06, 37G/11
Location	160 km south of Pond Inlet

The Mary River iron project is located 160 km south of Pond Inlet and has been explored sporadically since its discovery in 1962. The Mary River project currently consists of five deposits of high-grade iron and four additional iron prospects; regional exploration continues to identify other possible deposits on the property.



*Crenulation cleavage in specular hematite, Deposit No. 4, Mary River  
Courtesy of AARNIC*

In September 2010, Baffinland Iron Mines was the subject of an unsolicited take-over bid by Nunavut Iron Ore Acquisition Inc., a 100 per cent-owned subsidiary of Iron Ore Holdings LP. In November 2010, Baffinland entered into a support agreement with ArcelorMittal S.A. who offered a competing bid for the company. The parties subsequently offered a joint bid to acquire Baffinland and the deal was finalized in January 2011. The plan of arrangement, finalized in March 2011, gave ArcelorMittal 70 per cent ownership and Iron Ore Holdings 30 per cent ownership of Baffinland.

Deposit No. 1 contains proven reserves of 160.00 million tonnes at 64.4% Fe, and probable reserves of 205.00 million tonnes grading 64.9% Fe. Deposits No. 2 and No. 3 contain combined measured resources of 0.40 million tonnes (at 65.4% Fe), indicated resources of 52.00 million tonnes (grading 64.6% Fe) and inferred resources of 448.00 million tonnes at 65.5% Fe. Resource estimates for Deposits No. 4 and No. 5 had not been completed before the purchase of Baffinland by ArcelorMittal. However, assay results reported after the 2010 drilling season from these deposits were similar to those results from other Mary River deposits. At Deposit No. 4, one drill hole intersected three zones that assayed a composited 63.5% iron across an aggregate 34.4 m of mineralization. At Deposit No. 5, high-grade mineralization was intersected with 63% Fe over 16 m, 67% Fe over 30 m, and 66% Fe over 32 m. The majority of the holes drilled on these deposits have intersected high-grade zones of massive specular hematite and magnetite.

# QIKIQTAAALUK REGION

## IRON

In 2010, four additional mineralized zones were discovered at Mary River and were initially referred to as Deposits No. 6 through No. 9. Results from the prospecting program on these targets were considered encouraging by the company. Grab samples from Deposit No. 6 averaged 67.1% Fe along a northwesterly-striking high-grade zone up to 170 m wide and more than one km in length. The area of exposure corresponds with a magnetic anomaly of 4 km by 0.3 km. Deposit No. 7 was sampled and returned assay grades of 66.1% Fe over a surface area of 700 m by 100 m. A second mineralized zone of 300 m by 10 m was discovered at Deposit No. 7, approximately 1.3 km southeast of the initial discovery at the prospect. At Deposit No. 8, southeast of Deposit No. 1, assays from surface samples taken across two distinct northwest-striking zones returned results of 68.4% Fe with one sample returning a significant high-grade value of 71.4% Fe. These two mineralized zones are each 50 m wide, are exposed along strike for 400 m and 600 m, respectively, and lie on one limb of a 10-km wide regional scale fold. Deposit No. 9 is located 120 km east-southeast of Deposit No. 1. Two rock samples were collected from a high-grade exposure on the prospect and averaged 70.3% Fe.



Baffinland renamed Deposits No. 6 through No. 9 as prospects in 2011, as their economic viability is as yet undetermined. These prospects are now referred to as Glacier Lake (Deposit No. 6), Turner River (Deposit No. 7), North Cockburn River (Deposit No. 8), and North Rowley River (Deposit No. 9), respectively. Glacier Lake and North Cockburn have been mapped at a property scale, undergone ground magnetometer and gravity surveys, and have been grab- and channel-sampled. The other two prospects were mapped at a property scale. Reconnaissance traverses were performed around Glacier Lake and Turner River, covering more than 350 line-km. In the area of Steensby Inlet near North Cockburn and North Rowley River prospects, traverses covered more than 170 line-km.

Three additional prospects were discovered in 2011 and are named Wishbone Fold, Triangle Lake, and Long Lake. In order to cover areas between known zones of mineralization, a total of 347 new claims were staked in 2011. Many of these new claims are in the areas of the three prospects.

An aeromagnetic survey was completed on four regional property blocks for a total of 31,520 line-km. The data is currently being analyzed in preparation for drilling in the 2012 season. No exploratory drilling took place on the property in 2011, although geotechnical drilling was conducted along the proposed railway line to Steensby Inlet.

Exploration drilling is planned for the 2012 season.

In September, Baffinland and the Qikiqtani Inuit Association released a statement announcing that consensus had been reached on a number of aspects of the Inuit Impact Benefit Agreement between the two parties. This agreement will be finalized once the Baffinland project receives a Project Certificate from the Nunavut Impact Review Board.

  <b>ROCHE BAY<sup>1</sup>, TUKTU<sup>2</sup></b>	
Operator, Partner	Advanced Explorations Inc., Roche Bay plc
Commodity	Iron
NTS	47A/04 - 47A/06, 47B/02, 47B/09 - 47A/13, 47A/14, 47D/03, 47D/04 <sup>3</sup>
Location	72 km southwest of Hall Beach <sup>1</sup> , 70 km west of Hall Beach <sup>2</sup>

The Roche Bay and Tuktut iron projects are located on the Melville Peninsula, and are 100 per cent-owned by Advanced Explorations Inc. (AEI). The company entered into strategic partnerships with XinXing Pipes Group Co. Ltd. and its affiliate, China Haxin International Trade Co. in 2010, with specific clauses related to potential future production from the Roche Bay project. The projects consist of four mining leases and 15 claims at Roche Bay and 11 claims at Tuktut. Iron mineralization for both projects is magnetite occurring within banded iron formations (typically of Algoma-type banded iron formation).

As of May 2011, the NI 43-101-compliant resource estimate for the Roche Bay C-Zone consists of an indicated resource of 323.00 million tonnes of iron ore, averaging 26.7% total iron (25.8% magnetic iron) at a 20% iron cut-off grade. A further 226.00 million tonnes, averaging 25.8% total iron (23.8% magnetic iron) at a 20% iron cut-off grade, remains as an inferred resource. Zones A, B and D represent future targets with an existing historical, non-NI 43-101 compliant, combined resource of 700.00 million tonnes. The Tuktut project, located 60 km northwest of the Roche Bay deposit, is expected to have a revised NI 43-101 compliant resource estimate prepared by late 2011.



# QIKIQTAAALUK REGION

## IRON

In March 2011, AEI announced it was progressing on a Definitive Feasibility Study on the Roche Bay project. The \$20-million study, funded by XinXing, consists of exploration, geotechnical drilling, and metallurgical analyses of the iron ore to further define the Roche Bay and Tuktu resources. The new Definitive Feasibility Study business model for a potential future mine is based on production and shipment of 67 per cent iron ore concentrate. This is a change in focus from the previous model, which was based on the production and shipment of greater than 96 per cent iron nuggets.

The purpose of the geotechnical drilling is to examine two potential port locations and subsequent mine infrastructure components in Roche Bay. Phase 1 of the program is related to the proposed port facility and was completed in June 2011, while Phase 2, focusing on the mine infrastructure components, is scheduled to take place in mid-2012.

The 2011 field program at Roche Bay was planned to include up to 15,000 m of infill drilling, with the goal of increasing its NI 43-101-compliant resource estimate. Geotechnical drilling, prospecting, mapping, and sampling were also included in this work. Metallurgical testing was conducted on samples from Roche Bay's A and B zones, with preliminary results indicating that ore from the two zones can be concentrated into a 70% Fe product (with less than 3% silica). This ore is also suitable as a direct-ship ore with a 50% Fe content. The infill drilling was completed in September 2011; no results have been released.

The Tuktu project is located 70 km west of Hall Beach and 60 km north of the Roche Bay project. Work for 2011 included 4,070 m of diamond drilling, ground magnetometer surveys, prospecting, geological mapping, and sampling. Nineteen drill holes were targeted based on the magnetic survey results. These holes were drilled across the Tuktu deposit over an area 500 m wide and 2.6 km long with an average drill hole depth of 250 m. Additional high-grade ore was discovered from the drilling. Analyses of drill-core samples returned results of 50.19% Fe over 9.04

m, 50.27% Fe over 6.00 m, and 50.27% Fe over 8.00 m. Using 17 diamond drill holes with an average drill hole spacing of 250m, a NI 43-101 initial inferred resource estimate was generated: 465.00 million tonnes of 31.1 per cent total iron.

Best results from the prospecting program were two grab samples from the southeast portion of Tuktu; the samples were taken 1.6 km apart and assayed 63.85% Fe and 62.26% Fe. These results have been interpreted by AEI to indicate that Tuktu also has the potential to provide a direct-ship ore product.

854	SQ-05
Operator/Owner	McKinnon Prospecting Ltd.
Commodity	Iron
NTS	33M/14, 34D/02
Location	70 km southeast of Sanikiluaq

In 2010, McKinnon Prospecting Ltd. entered into an exploration agreement with Nunavut Tunngavik Incorporated on two IOL subsurface parcels located on the Belcher Islands in Hudson Bay. The portion of IOL parcel SQ-05 excluding the Haig Inlet project area (detailed above), has been retained by McKinnon Prospecting. This property block is underlain in part by the Paleoproterozoic Kipalu Formation, an iron formation that is being explored at Haig Inlet. Since acquiring SQ-05, a site visit has been conducted but no exploration work has been done. The closest settlement to the permitted areas is the hamlet of Sankiluaq.

Tuktu Camp  
Courtesy of AANOC



# QIKIQTAAALUK REGION

## INACTIVE PROJECTS

### INACTIVE PROJECTS

The Qikiqtaaluk region includes two decommissioned mines that ceased production in 2002. The **Nanisivik** zinc-lead-silver mine is located on the north end of Baffin Island near the community of Arctic Bay. The **Polaris** lead-zinc mine is located on Little Cornwallis Island, north of Resolute. Environmental monitoring continues at both sites.

The **Baffin Island** diamond project owned by Burnstone Ventures Inc. (formerly Pure Diamonds Exploration Inc.), comprises a block of claims northeast of Igloolik. Burnstone Ventures acquired a 100 per cent-interest in the property in 2008 from its former joint venture partner De Beers Canada Mining Inc. Although the land tenure remains in

good standing, no work has been reported from the property. Further north on Baffin Island, Indicator Minerals Inc. is the operator of the **Borden** diamond project, located southeast of Arctic Bay. Indicator has a 51 per cent interest in the project and North Country Gold Corp. holds the remaining 49 per cent. Work was last reported on the property in 2008.

The **Beluga** sapphire project, owned by True North Gems Inc., is located near the community of Kimmirut on southern Baffin Island. The company completed a legal survey of the claims on the property, a necessary step before bringing the claims to lease, but no exploration work was conducted on the property in 2011.

Number	Project	Operator
BASE METALS		
 728	Nanisivik Mine	Canzinc Ltd. (Breakwater Resources Ltd.)
 729	Polaris Mine	Teck Resources Limited
DIAMONDS		
 787	Baffin Island	Burnstone Ventures Inc.
 788	Borden	Indicator Minerals Inc.
GEMSTONES		
 819	Beluga	True North Gems Inc.

Please refer to the map on page 57 for the location of inactive projects in the Qikiqtaaluk region.

Frobisher Bay islands  
January 2012



# GUIDE TO ACRONYMS

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AANDC – Aboriginal Affairs and Northern Development Canada

CanNor – Canadian Northern Economic Development Agency

CGM – Canadian Geoscience Map

CNGO – Canada-Nunavut Geoscience Office

DPA – Development Partnership Agreements

EA – Inuit Owned Lands Mineral Exploration Agreement

EDT – Department of Economic Development and Transportation, Government of Nunavut

EM – electromagnetic

Ga – billion year-old

GEM – Geomapping for Energy and Minerals

GN – Government of Nunavut

GSC – Geological Survey of Canada

InSAR – Interferometric synthetic aperture radar

IOL – Inuit Owned Land

KIDD – Kimberlite Indicator Database

KIM – Kimberlite Indicator Mineral(s)

KIMC – Kimberlite Indicator Chemistry Database

Ma – million year-old

NI 43-101 – National Instrument 43-101

NIRB – Nunavut Impact Review Board

NLCA – Nunavut Land Claims Agreement

NPP – Nunavut Prospectors' Program

NRCan – Natural Resources Canada

NTGO – Northwest Territories Geoscience Office

NTI – Nunavut Tunngavik Incorporated

NTS – National Topographic System

NWT – Northwest Territories

PGE – Platinum Group Elements

RC – Reverse Circulation

RIA – Regional Inuit Association

VMS – Volcanogenic Massive Sulphide

Map Number	Project (Page)
<b>Advanced Explorations Inc.</b>	
853	Roche Bay (66)
855	Tuktu (66)
704	Western Permits (59)
<b>Agnico-Eagle Mines Limited</b>	
527	Meadowbank Mine (42)
528	Meliadine (44)
545	Muskox (54)
547	Parker Lake (54)
675, 678	North Thelon (Judge Sissons, Schultz Lake) (53)
<b>Alix Resources Corp.</b>	
244	Arcadia Bay (34)
544	Cache (54)
<b>Anconia Resources Corp.</b>	
610	ARNI (47)
526	Marce (42)
532	RB (42)
537	Zac (42)
<b>Anglo American Exploration (Canada) Ltd.</b>	
613	Southampton Island (48)
<b>AngloGold Ashanti Holdings Plc</b>	
820	Bravo Lake (63)
821	Qimmiq (63)
<b>Arctic Star Diamond Corp.</b>	
187	Siku (34)
<b>AREVA Resources Canada Inc.</b>	
674	Kiggavik (52)
<b>Aura Silver Resources Inc.</b>	
400	Greyhound Lake (38)
<b>Baffinland Iron Mines Corporation (ArcelorMittal S.A., Iron Ore Holdings LP)</b>	
852	Mary River (65)
<b>Bayswater Uranium Corporation</b>	
684-690	Canada Uranium Joint Venture (Amer East, Amer West, Itza Lake, Permit 1, Permit 2) (54)
<b>BHP Billiton Diamonds Inc.</b>	
761	Chidiak (61)
<b>Burnstone Ventures Inc.</b>	
787	Baffin Island (68)



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Map Number	Project (Page)	Map Number	Project (Page)	Map Number	Project (Page)
<b>Cache Exploration Inc.</b>		<b>Elgin Mining Inc.</b>		<b>Kaminak Gold Corporation</b>	
640-642	Nunavut Rare Earth (PP 8183 to 8185, PP 8186 & 8187, PP 8188) (48)	235	Lupin Mine (30)	248	Needle Lake (34)
		237	Ulu (30)	549	SY (34)
<b>Cameco Corporation</b>		<b>Exploratus Ltd.</b>		<b>Kivalliq Energy Corporation</b>	
670	Aberdeen (49)	546	Napajut (54)	672, 673	Angilak (Lac Cinquante, Yathkyed) (51)
692	Nueltin Lake (54)	<b>Forum Uranium Corp.</b>		<b>McKinnon Prospecting Ltd.</b>	
682	Turqavik (49)	675-680	North Thelon (Judge Sissons, Kiggavik North, Kiggavik South, Schultz Lake, Tanqueray Block, Ukalik) (53)	851	Haig Inlet (64)
<b>Canada Coal Inc.</b>		643	Nutaaq (49)	854	SQ05-001 (67)
730	Fosheim Peninsula (60)	<b>Golden River Resources Corporation</b>		<b>MMG Resources Inc.</b>	
731	Vesle Fiord (60)	246	Contwoyto IOL Concessions (34)	310	Amaruk Nickel (33)
<b>Canada Nickel Corp.</b>		247	Hood River IOL Concession (34)	245	Canoe Lake (base metals) (34)
529	Peter Lake (45)	249	Rockinghorse IOL Concession (34)	100	Gondor (20)
<b>Canadian Orebodies Inc.</b>		<b>Hope Bay Mining Ltd.</b>		<b>103</b>	<b>High Lake</b> (22)
851	Haig Inlet (64)	<b>(Newmont Mining Corporation)</b>		104	High Lake East (22)
<b>Canzinc Ltd.</b>		228	Elu Belt (28)	<b>106</b>	<b>Izok Lake</b> (22)
<b>(Breakwater Resources Ltd.)</b>		231-234	Hope Bay (Boston, Chicago, Doris, Madrid) (29)	105	Hood (20)
728	Nanisivik (68)	<b>Hornby Bay Mineral Exploration Ltd.</b>		<b>Mega Uranium Ltd.</b>	
<b>ColtStar Ventures Inc.</b>		370	Coppermine (33)	681	Thelon Basin (53)
700	Allen Bay Copper (58)	395	HBME / MIE Metals Corporation Joint Venture (34)	<b>MIE Metals Corp.</b>	
701	Eleanor (58)	<b>Hunter Exploration Group</b>		398	Bear Valley (34)
<b>Commander Resources Ltd.</b>		760	Aviat (60)	395	HBME / MIE Metals Corporation Joint Venture (34)
820	Bravo Lake (63)	161	Barrow (23)	338	MIE (34)
821	Qimmiq (63)	183	Darby (34)	<b>North Arrow Minerals Inc.</b>	
703	Storm (58)	184	Grail (34)	124	Anialik (base metals) (34)
<b>DAEWOO International Corp.</b>		462	Nanuq North (39)	243	Anialik (gold) (34)
<b>674</b>	<b>Kiggavik</b> (52)	<b>Indicator Minerals Inc.</b>		126	Canoe Lake (base metals) (34)
<b>Diamonds North Resources Ltd.</b>		161	Barrow (23)	245	Canoe Lake (gold) (34)
160	Amaruk (22)	788	Borden (68)	162	Hammer (23)
220	Amaruk Gold (25)	183	Darby (34)	230	Oro (31)
310	Amaruk Nickel (33)	184	Grail (34)	309	Torp Lake (34)
161	Barrow (23)	462	Nanuq North (39)	<b>North Country Gold Corp.</b>	
489	Diamonds North Permits (54)	<b>International Samuel Exploration Corp.</b>		788	Borden (68)
229	Halkett Inlet Gold (29)	188	Ualliq (34)	223-227	Committee Bay Gold (Anuri, Inuk, Raven, <b>Three Bluffs</b> , West Plains) (27)
185	Hepburn (34)	<b>IronOne Inc.</b>		<b>Northquest Ltd.</b>	
396	Northern Hepburn (34)	550	Maguse River (46)	531	Pistol Bay (45)
186	Sakari (34)	<b>JCU Exploration (Canada) Co. Ltd.</b>		<b>Northrock Resources Inc.</b>	
187	Siku (34)	874	Kiggavik (52)	391, 392	Bathurst Inlet (Pomy, Upits) (34)
533-536	South Nunavut (Esmer, Fox, River, Yandle) (46)			236	Turner Lake (32)
188	Ualliq (34)				
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<b>Pacific Ridge Exploration Ltd.</b>		487	Churchill (54)	520-523	Aura Consolidated Gold (AN, F13, Nowyak, Robin) (40)
684	Baker Lake Basin (54)	488	Churchill West (54)	548	KAM (gold) (54)
<b>Peregrine Diamonds Ltd.</b>		<b>163</b>	<b>Jericho Mine</b> (24)	525	Mallery Lake (41)
761	Chidliak (61)	164	Rockinghorse (25)	396	Northern Hepburn (34)
762	Cumberland (62)	186	Sakari (34)	694, 696-699	South Baker (Hawk, JG, KAM, L1, SW Hawk) (54)
461	Nanuq (39)	<b>Skybridge Development Corp. (Mega Precious Metals Inc.)</b>		695	Yathkyed (54)
462	Nanuq North (39)	125	Blue Caribou (34)	<b>Uravan Minerals Inc.</b>	
763	Qilaa (62)	<b>Starfield Resources Inc.</b>		691	Garry Lake (54)
<b>Pitchstone Exploration Ltd.</b>		460	Ferguson Lake (diamonds) (38)	<b>Ur-Energy Inc.</b>	
393	Dismal Lake (34)	611	Ferguson Lake (Ni-Cu-PGE) (47)	685	Bugs (54)
394	Dismal Lakes West (34)	<b>Stornoway Diamond Corporation</b>		<b>Vale Canada Limited</b>	
397	Kendall River (34)	760	Aviat (60)	702	Melville Permits (58)
399	Mountain Lake (34)	486	Chesterfield Inlet (54)	612	Southampton (48)
<b>Prize Mining Corp.</b>		487	Churchill (54)	<b>West Melville Iron Company Ltd.</b>	
339	Muskox (34)	488	Churchill West (54)	850	Fraser Bay Deposit (64)
<b>Prosperity Goldfields Corp. (Evolving Gold Corp.)</b>		162	Hammer (23)	<b>Xstrata Zinc Canada</b>	
524	Kiyuk (41)	463	Qilalugaq (40)	100	Gondor (20)
<b>Rio Tinto Exploration Canada Inc.</b>		<b>Strongbow Exploration Inc.</b>		<b>101</b>	<b>Hackett River</b> (20)
164	Rockinghorse (25)	686-690	Canada Uranium Joint Venture (Amer East, Amer West, Itza Lake, Permit 1, Permit 2) (54)	127	Musk (34)
<b>Roche Bay plc</b>		128	Silvertip (34)	107	Wishbone (20)
<b>853</b>	<b>Roche Bay</b> (66)	<b>Teck Resources Limited</b>			
855	Tuktu (66)	183	Darby (34)		
850	Fraser Bay Deposit (64)	729	Polaris Mine (68)		
<b>Ruby Hill Exploration Inc. (Western Uranium Corporation)</b>		<b>Thanda Resources Ltd.</b>			
693	Ruby Hill (54)	460	Ferguson Lake (diamonds) (38)		
<b>Sabina Gold &amp; Silver Corp.</b>		<b>Titan Uranium Inc.</b>			
221, 222	Back River (George Lake, Goose Lake) (26)	681	Thelon Basin (53)		
238	Wishbone Gold (32)	<b>Triex Minerals Corporation (CanTerra Minerals Corporation)</b>			
<b>Savant Explorations Ltd.</b>		393	Dismal Lake (34)		
129	Yava (34)	394	Dismal Lakes West (34)		
<b>Sennen Resources Ltd.</b>		397	Kendall River (34)		
230	Oro (31)	399	Mountain Lake (34)		
		<b>True North Gems Inc.</b>			
		819	Beluga (68)		



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